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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

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NAVAL RESERVE BILL.

As was stated in the Army and Navy Journal of January 4 there is considerable dissatisfaction among the naval militia organizations of the various states over the bill for the establishment of a naval reserve as prepared by the Navy Department and introduced in the House by Representative Foss, Chairman of the Committee on Naval Affairs. This week, at the request of the Association of Naval Militia Organizations, the Navy Department has forwarded to Congress the two bills prepared by the Association: one defining the relations of the Naval Militia of the several states to the Federal Government, and the other providing for the enrollment and organization of a United States Naval Reserve. The Department has also forwarded the bill for the establishment of a Naval Reserve as prepared by the General Policy Board of the Navy.

The bill of the Naval Militia Association providing for a Naval Reserve has the following important section: "Members of the United States Naval Reserve shall not be called into active service in time of peace unless they so elect, but they shall perform such duty in the form of drills, exercises or courses of study as the Secretary of the Navy may determine, in which case they shall be subject to the same articles, rules, regulations and penalties and receive the same pay, allowances and privileges as the officers and men of the navy, but no such pay, allowances or penalties shall be in excess of those for the period of duty actually performed by such officers and men. In time of war, or when war is imminent, the President may call into active service any or all of the officers and men of the United States Naval Reserve, and they shall obey such call under the pain and penalty of desertion."

This bill appropriates $200,000 for the expenses of the Reserve and provides "That any vessel commanded by a commissioned officer of the United States Naval Reserve which shall have in her complement at least five other officers or men of the said United States Naval Reserve, shall be known as a United States Naval Reserve Ship and shall have the right to fly a distinctive flag; provided that the color, shape and size of such flag and the manner of flying the same shall be prescribed by the Secretary of the Navy."

The bill of the Association defining the relations of the Naval Militia of the several states to the Federal Government empowers the Secretary of the Navy to appoint an officer of the navy to inspect, drill, etc., all those Naval Militia organizations liable to be called into the service of the government in time of war. The Secretary is also empowered to formulate rules and regulations for the organization, discipline, training, armament and equipment of such State Militia with a view to producing uniformity among the various State Naval Militias and assimilating them to the standard of the United States Navy. It is provided by this bill that in time of war no State Militia organization shall be mustered into the service of the government as an organization unless such proportion of its officers and men as may be determined by the Secretary of the Navy shall for the period of one year immediately preceding said call have maintained the standards provided for in the first section and which are stated above.

A bill for the organization of a Naval Reserve has been prepared by the General Policy Board of the Navy. Following is a synopsis:

The Reserve shall not exceed 20,000 men, including all grades and ratings. It shall be composed of able-bodied men, who are or who have been connected with a seafaring life, and other citizens who may pass successfully an examination to be determined by the Navy Department.

The officers shall consist of three classes, including line and engineer: Lieutenants, 300; lieutenants (j. g.), 200; ensign, 100. The period of enlistments shall be five years, age limit and other qualifications to be determined by the Secretary.

The rank of officers and the ratings of enlisted men and their promotion shall be determined by examination, except in the case of those who distinguish themselves in action or by meritorious service, who may be advanced by the President without examination. Men to supply their own outfit, except that the sleeping outfit during drill terms shall be provided by the government, graduates of the Naval Academy, yacht owners who navigate and manage their own vessels, and masters of ocean-going steamships of over 3,000 tons may be commissioned without examination.

Officers and men of the Naval Reserve shall receive a retaining fee as follows: Lieutenants, $200 per year; lieutenants, junior grade, $150 per year; ensigns, $100 per year; enlisted men not to exceed an average per man of $50 per year.

All shall perform annual drills, not less than thirty days per year, receiving traveling expenses in addition to their pay. Those who cannot serve thirty days continuously may serve for shorter terms of not less than six days until the thirty days have been completed.

The Secretary of the Navy may, in his discretion, stop the pay or retaining fee, or both, or any portion thereof, for bad conduct, reported by the commanding officer. Preference for appointment shall be given to veterans of the war with Spain. The names of officers shall be borne upon the Naval Register, and officers shall be permitted to fly a special Naval Reserve flag when commanding merchant ships or yachts carrying crews of not less than half the complement (excluding stewards and messmen) of Naval Reserve men.

The navy laws and regulations governing pensions and hospital treatment shall apply to the Naval Reserve. Those showing special aptitude may be received, upon their own request, on board cruising men-of-war for a period not exceeding twelve months, performing the duties and receiving the pay and emoluments of officers and men in the navy in addition to their retaining fee.

The President shall have power, at his discretion, to call the Naval Reserve into active service in case of war or imminence of war, and while so serving, the pay and emoluments of the regular navy shall be allowed them. Men enrolled in the Naval Reserve shall be regarded as in the service of the United States. Continuous service for fifteen years as a commissioned officer entitles a Reserve officer to an honorable discharge with the honorary rank and title of the next higher grade.

Naval Reserve service exempts from jury and militia duties, and twenty years' satisfactory service as a petty officer or an enlisted man to exemption from further drill attendance, with the right to still draw the retaining fee and to be admitted to the Sailors' Home.

One hundred thousand dollars is appropriated for the purpose of this bill.

The Navy Department will still urge the passage of its own bill which was introduced by Mr. Foss.

Seamen—Refusal to Perform Contract for Service—Coercion by Imprisonment. Since the passage of Act Dec. 21, 1898 (2 Supp. Rev. St. 897), there is no authority for the imprisonment of a seaman for refusing to further perform his contract for service on a ship when at any port; and such imprisonment at the instance of the master, whether through judicial process or otherwise, is a violation of his personal rights which renders the vessel liable in damages. The South Portland, 111 Fed. Rep. (U. S.) 767.

GERMAN FORECAST OF AMERICAN COMPETITION.

Under the title of "The Growing Iron and Coal Exports of the United States," the Vossiche Zeitung (Berlin), of November 11, publishes the following from its correspondent at Essen:

In the circle of large operators in the Lower Rhine-Westphalian iron and coal district, the efforts of the United States to supply the continent of Europe with iron manufactures and coal are regarded with great interest and growing anxiety. A leading ironmaster of Ruhr district recently expressed himself to a small circle of technical colleagues to the effect that within a period of ten years, America would be supplying all Mediterranean countries, including Austria-Hungary, with coal and iron. As reasons for this opinion, he stated that no other country can produce and transport iron in enormous quantities so cheaply and under such favorable conditions as the United States. When it is found that the necessary return freight from Europe for their coal ships is wanting, they will build their colliers so that they can use water ballast on their return voyage. The ocean-freight schedules of all maritime nations will be so depressed by this competition that the item of sea transportation will play practically no role in the economy of internal trade. It will be then, even more than now, a simple question of which country can produce the most cheaply, and that country, will, unquestionably, be the United States, with its virgin soil and its inexhaustible mineral resources. An effective protection against this deluge of American products through high tariffs will be impossible, because the United States can dispense entirely with European manufactured merchandise, and thus be in a position to close its frontiers to foreign trade. Europe will then have but one recourse which can provide any effective resistance to America, and that will be when all countries here form a close commercial union or league. Otherwise, the material strength and resources of the contestants will be too unequal.

NAVAL STATION ON THE LAKES.

The Secretary of the Navy on January 6 wrote the following letter to Senator Eugene Hale, Chairman of the Senate Committee on Naval Affairs:

"Sir:—The department has under consideration the advisability of establishing a naval training station at some suitable place on the Great Lakes where young men enlisted for the Naval Service in the middle west may be assembled and receive preliminary training before being sent to cruising ships. Experience has shown that a large amount of good material is available in this section for service in the navy, and the establishment of a training station in the vicinity referred to will, it is thought, induce the enlistment of a large number of men, and thereby advance the interests of the navy. Some of those who have heretofore enlisted, however, have been found, after a few months' training, to be wholly unsuited for seafaring life, thus necessitating their discharge. A weeding-out process at a training station would, therefore, be advantageous for the men and for the economy and best interests of the service. Naval training stations are now in successful operation at Yerba Buena Island, San Francisco, Cal., and Newport, R. I., and another is in process of establishment at Port Royal, S. C. The location of one on the Great Lakes where, with the adjacent country, an excellent field exists for the enlistment of desirable men, would result in great benefit to the naval service. In order to initiate the establishment of such a station, a draft of an amendment suitable for insertion in the Naval Appropriation Bill for the forthcoming fiscal year is transmitted herewith, and commended to the favorable consideration of the Committee."

Navigation returns at Montreal show a falling off in foreign going ships and tonnage this year. The figures are: 1896, 516 ships; 1899, 434 ships; 1900, 416 ships; 1901, 396 ships. The tonnage decreased from 1,038,234 tons in 1900 to 988,018 tons in 1901. There has been a slight increase in the business with lower ports. The number of vessels in 1900 was 271; 1901, 288, but in 1899 there were 344 vessels. The tonnages were, 1899, 402,325; 1900, 327,559; 1901, 412,310.

BUFFALO.

Special Correspondence to The Marine Record.

Major Thomas W. Symons, chief of the engineering department of the 9th district, is confined to his home with a severe cold and sore throat.

New rooms have been secured by the members of the Marine Cook's Beneficial Association, on the third floor of the building at No. 55 Main street. Regular meetings will take place every Wednesday evening.

A special meeting was called by Marine Engineers' Beneficiary Association No. 1, Wednesday evening, for the purpose of instructing delegates to the national convention at Washington, January 20th. The convention will be one of the most important ever held.

The steamer Kittie M. Forbes has been bought by John J. Boland to replace the steamer W. L. Wetmore, which was lost in Georgian Bay last December. It is reported that the price paid C. McLaughlin, of Port Huron, for the Forbes was $22,000. The Forbes came out in 1883 and is 209 feet keel by 34 feet beam. She has hitherto been engaged in the grain, coal and iron ore trades.

Marine insurance agents say that as the figures of the season are made up more and more completely, the prospect of a general loss to all the companies, becomes, more a certainty than was supposed. The grounding of steel boats is held to be the chief reason why the losses are so great regarding dry docking and bottom repairs, which seems to be a daily occurrence throughout the season of navigation.

At a meeting of the Licensed Tugmen's Protective Association of Buffalo, the following officers were elected for the ensuing year: H. H. Vroman, president; W. E. Bradley, vice president; A. G. Gilbert, financial secretary and treasurer; William G. Fox, corresponding and recording secretary; L. P. Cole, trustee. Delegates to the grand lodge were chosen as follows: H. H. Vroman, Charles Nash, John O'Connor, John Doyle.

Supt. Kennedy, grain discharging superintendent of the Lake Carriers' Association has made up his annual report. He states that he has elevated 132,000,000 bushels of grain and flaxseed during the year, of which about 2,000,000 bushels should be credited to last winter cargoes or transfer business. The amount for the year 1900 was 157,000,000 bushels in the aggregate, so that the falling off is really only 25,000,000, which is no more than should be warranted by the short grain crops of late.

Although the local interests are not making much noise about it, an effort is being made to get all the masters and mates into one organization and the lake lodges of the American Association of Masters and Pilots are taking new members in very fast. A prominent member of the order said that the engineers after their well won strike had it now all their own way and that the deck people had to do something to protect themselves as regards wages, respect and discipline, as both ends of a boat ought to run the same way.

The American Association of Masters and Pilots of Steam Vessels, Harbor 41, Buffalo, elected the following officers for the current year: M. S. Peterson, captain; S. Campbell, first pilot; B Broadrick, second pilot: M. J. Halleron, purser; G. Welcome, captain's clerk Delegates to Grand Harbor, M. S. Peterson, C. E. Fuller and J. C. Clark. Trustee, Captain Shields, Captain Clarke and Captain Buckley. Reception and Ball Wednesday, January 22, German American hall. Music by Seventy-fourth Regiment Orchestra.

There is a concerted movement to secure funds from Congress for deepening the ship canal known as Black Rock Harbor. During the holiday vacation Congressmen Wadsworth, Alexander, and Ryan, of the Erie and Niagara districts, met a delegation of the Buffalo Merchant's Exchange and the matter was thoroughly canvassed. It is claimed that the rapids in Niagara River, which this canal parallels can never be made safe for vessels and that all further effort to improve the route to Tonawanda should be given to the canal instead of the river proper. It is shown that if all the money expended on the river there had been used on the canal there would now have been a good deep passage down the Niagara, while now there is a constant expense to vesels that strike on the river. There was an entire harmony of opinion in regard to the change of plan. Major Symons, the government engineer in charge, cheerfully coinciding, as he was never in favor of deepening the river, especially as it lowers the entire level of Lake Erie It is believed that enough was done at the meeting to insure an item in the river and harbor bill calling for a survey and recommendation favoring the deepening of the canal.

Junius S. Smith, weighmaster of the Merchants' Exchange, has made his report of the amount of grain handled by his department during the past season. With a decrease of 25,000,000 bushels in the total receipts of 1901, the report covers a much smaller amount than for the previous year. The average shortage is something less than a peck per one thousand bushels, and will be further reduced by an adjustment which is promised. Following is the total receipts of grain and flaxseed: Wheat, 61,204,248; corn, 30,539,848; oats, 21,428,848; barley, 7,687,239; flaxseed, 10,425,664. Total, 132,641,828.

Plenty of evidence is given that the canal improvement outlined in the message of Governor Odell meets the approval of the canal interests of the state. Buffalo and New York are united on the proposition Governor Odell said that seemed to be the situation. But a question has been raised as to the manner of drafting the legislation to carry out the Governor's recommendations, and the bill or bills will not be introduced until early next week. Bills carrying out the Governor's recommendations were practically ready and would probably have been introduced before this, had not a question of constitutionality been raised. One of the bills provides a referendum on the proposition to increase the locks to accommodate 1,000-ton barges and to cut a new channel from Rexford Flats to the Hudson River. The other bill provides a referendum for the completion of the improvement of deepening the canal to nine feet.

When it becomes necessary, as is said to be the case, for many of the largest freight boats, which would otherwise winter in Buffalo, to go to Cleveland and Conneaut for that purpose, the serious loss to the business interests of this city, on account of the lack of dock room, must be evident. It is estimated that each freighter causes a demand for refittings every season amounting to from $500 to $2,000 in the place made its winter quarters. The dearth of dockage facilities in this port deviates to other lake cities many thousands of dollars of trade every season. Corporations owning available land to which boats could be tied for the winter are accused, in some instances, by the vessel proprietors of denying the privilege even for a fair rental and upon guarantee that the dock owners shall be protected from damage loss. These owners, of course, have the right to do as they please with their property, but when their conduct drives commerce away from Buffalo they connot expect to escape adverse criticism.

A statement just issued in the United States Customs Office gives the total arrivals and clearances of vessels in both the coastwise and the foreign trade for the year 1901. The figures show an enormous increase in the number of foreign vessels in foreign trade and the number of American vessels in foreign trade. A marked decrease is noted in the number of vessels sailing in the coastwise trade as compared with the year 1900. This shortage is attributed to the decrease of grain shipments from the west, notably corn. Twenty-five million bushels less corn was handled on the lakes during 1901 than during 1900. The figures follow: Coastwise business for 1901: Arrivals, 3,350; tonnage of cargoes, 4,535,143; clearances, 3,453; tonnage, 4,540,159. Coastwise business for 1900 Arrivals, 3,745; tonnage, 5,016,527; clearances, 3,850; tonnage, 5,060,103. The decrease in coastwise business is obvious. American vessels in foreign trade arriving at Buffalo during 1901, 1,805; tonnage, 365,547; clearances, 1,799; tonnage, 503,399. The same for 1900: Arrivals, 1,036; tonnage, 293,442; clearances 1,038; tonnage, 282,207. These figures show an increase. Foreign vessels in foreign trade during 1901: Arrivals, 610; tonnage, 168,405; clearances, 581; tonnage, 142,379. The same for 1900: Arrivals, 164; tonnage, 131,161; clearances, 140; tonnage, 17,784. The latter figures show an unprecedented percentage of increase.

SARNIA, ONT., Jan. 13th, 1902.

To the Editor of The Marine Record:

Capt. David Foster, son and grandson, called on me to-day from Marine City. I was real glad to see them. Capt. Foster sailed with me sixty-four years ago. I think that we are the only ones left that sailed vessels at that time. After leaving me he built a vessel of his own and sailed her. He also built a number of other vessels for himself and some steamers. He has been at Fenton, Mich., some time, and has steamers on those small lakes in Michigan. Age has crept on him as well as myself. I do think he will weather me. He is on a visit to his son at Marine City, who is an engineer on some cargo steamer, and his grandson also. He has one son who is a doctor; all of his family have energy of character. The ice blocked the rivers at Marine City this morning. We have had a cold storm here for two days past. Hoping this will find you all well, I remain,

Yours very respectfully,
CHARLES GALE.

BRIDGE ACROSS BEHRING STRAIT.

A steel bridge across Behring Strait, to connect the Siberian railway with the American system is again being talked of. The Strait is thirty-five miles wide, but there is a string of islands which would form natural piers for such a structure. The climatic conditions appear to be one of the chief difficulties in the way, otherwise there is nothing impracticable about the project. United States, Russian and French capitalists are said to be interested. Should it be carried out, the Lion bridge in China, now the longest in the world, would be cast completely in the shade.

DULUTH-SUPERIOR.

Special Correspondence to The Marine Record:

At a regular meeting of Duluth Harbor, No. 44, American Association of Masters and Pilots of Steam Vessels, the following officers were elected: H. J. Hawkes, captain; Joseph Jacobs, first pilot; Lawrence Roy, second pilot; C. D. Hibbard, captain, clerk and purser; William Jones, purser's clerk; A. C. Majo, chaplain; L. M. Stapnes and A. M. Jones, port quartermasters; Fred Winter and Dan Neville, starboard quartermasters; A. S. Osborn, forward deck watchman; H. J. Hawkes, John Grady and A. C. Majo, trustees; C. D. Hibbard, delegate to Grand Harbor meeting; William Jones, alternate.

The steel steamer Huronic, that was launched a short time ago at the shipyard at Collingwood, Ont., will be the fastest steel boat on the Great Lakes, said Charles T. Long, of Toronto, at the Spalding, to a News-Tribune man. Mr. Long is of the shipbuilding company, and interested in various Canadian transportation lines. Continuing, he said :"The Huronic will be the first boat of the Northwest Transportation Co. to arrive at Duluth next season, and three more, just like her, are to be built during 1902, to go in commission in the spring of 1903. During the season of 1903 the Northwest Tronsportation Co. designs to have a boat leave there every day in the week, except Sunday, for Duluth. The four new boats in connection with the United Empire and Monarch will enable us to do that. They will ply along the usual route via Port Arthur between Sarnia and Duluth. But I started out to say something about the speedy qualities of the Huronic. She will be able to steam eighteen miles an hour, and she is the only steel steamer on the lakes that can do it, except the North West and the North Land. I know that these latter boats are reputed to be very swift, but as near as I can find out they never came up to expectations as regards speed. The Huronic also is the only double deck steamer on the lakes with accommodation for 250 first-class passengers. The first and second-class passengers are to be kept strictly separate. The Huronic is a first-class steamer, and she will attract no little attention when she comes out. The freight capacity is 8,000 tons. It is an interesting fact that the three new sister boats to the Huronic, which will be built in 1902, will be canadian products in every sense. They will be constructed from steel made at the Cramp plant at Collingwood, which will begin operations April 1 next, and the ore from which the steel is made, comes from the Helen mine, on the Michipicoten range."

PORT HURON.

Capt. Albert Curtis left last week for Buffalo where he will attend the case of the sunken schooner John Martin vs. the steam barge Yuma.

Capt. J. W. Montgomery left for Washington a few days ago as the Port Huron representative to the convention of Masters and Pilots.

The annual ball and reception of the Shipmasters' Association will be held at the New Armory on January 23. The reception and banquet will be held at the Harrington.

About 175 men now find employment at the Jenks Ship Building Co.'s yards. The government boat which is in process of construction is rapidly nearing completion. Boat No. 17 is well under way.

Robt. Thompson left recently for Bay City where he will purchase a tug and two barges. He expects to establish himself in the wrecking business at the "Soo" during the coming summer. Mr. Thompson will buck the trust at the "Soo." Capt. Bob with his many friends will give every one who is in the field or who may enter it, a lively run for their money.

TORONTO.

Special Correspondence to The Marine Record:

Toronto, St. Catherines and Windsor capitalists, according to a St. Catherines dispatch, are contemplating the construction of an up to date drydock at either St. Catherines or Toronto. The company will be capitalized at $50,000. The news gives satisfaction to vessel owners here, who badly feel the need of a dock for large boats.

The Montreal harbor revenue shows a falling off in 1901 as compared with 1900. For 1900 the revenue amounted to $256,576; in 1901, $249,488. The difference is accounted for by the reduction in wharfage rates, which caused a loss of about $50,000.

The vessels in winter quarters here are: Schooners—Rutherford, Van Straubenzie, Lydon, Reuben Doud, S. Dunn, Emerald, Antelope. Steam Barges—St. Joseph, D. R. Van Allen. Propellers—Ocean, Melbourne, Cuba, Persia. Passenger Steamers—Toronto, Kingston, Niagara, Canada, Hamilton, White Star, and A. J. Tymon.

It is reported that the R. & O. Navigation Co. will put on a third steamer between Rochester, Prescott and Toronto. The steamers on this route during the past summer were the two large new vessels, the "Toronto" and "Kingston." The success of these two boats in the passenger business last season was remarkable, and this year their run will likely be extended to take in Oswego.

DETROIT.

Special Correspondence to The Marine Record:

The Northern Engineering Works recently shipped electric traveling cranes to Brussels, Belgium; Copenhagen, Denmark; and Scotland.

The Detroit Graphite Manufacturing Co. has appointed C. L. Robinson, to act as assistant to T. R. Wyles, Western manager of the firm, whose office is at 1425 Monadnock Block, Chicago.

A company with a capital of $1,000,000 has purchased a site at Collingwood, Ont., on which to erect a factory for the manufacture of marine and stationary engines, machinery, etc. Thomas Long and Capt. McDougall are identified with the enterprise.

Congressman Burton has introduced a bill in the House carrying an appropriation of $45,000 for the construction of a light-ship with fog signals for service at Point au Pelee Passage. The same bill has been introduced in the Senate by Senator McMillan, of Michigan.

The Michigan Steamboat Co., whose offices are located at Utica, Mich., has filed articles of incorporation, its capital stock being $125,000. The stockholders are F. J. Hecker, Watson M. Freer, James McMillan, A. McVittie; A. McVittie, trustee; Frank E. Kirby, Carrie McQueen, and Mary M. Parke.

The usual large amount of repair work on vessels will be carried out here during the winter. Marine City, Bay City, Port Huron and other Michigan lake ports will also have their full share of work. The Craig Ship Building Co., at Toledo is to be very busy besides lengthening their own drydocks about 75 feet.

The following meteorological observations are furnished by the office of the U. S. Weather Bureau, Detroit, for the week ending January 14th, 1902. Prevailing wind directions for the week, N.W.; highest velocity 35m at 12:30 on the 11th. Mean temperature for the week, 27; highest temperature 35 degrees on the 14th; lowest 14 degrees on the 12th.

Capt. James Davidson, Bay City, Mich., has awarded a contract to the American Construction & Supply Co., of New York, to build for him, at Dresden, Ont., a sugar factory, the minimum capacity of which will be 600 tons of beets. This company is the same that is building the factory at Sebewaing, Mich., the superintendent of which factory is Emil Brysselbout.

The members of lodge No 2, Shipmasters' Association elected their officers last week as follows: President A. C. May; first vice president, P. F. Powrie; second vice president, James W. Montgomery; treasurer, D. M. Sinclair; financial and recording secretary, M. A. Budd; Delegate to the Grand Lodge at Washington, C. C. Balfour. Alternate, A. C. May.

The talk about Barry Bros. of Chicago trying to compete with the D. & C. Line, with the old wooden steamers, is reported by vesselmen here as being foolish. It is stated that not less than twenty mile, high class steel steamers could attempt to compete with the favorite and well established line of the late David Parker, conducted so admirably for several decades.

The steamer Western States, second of the new side-wheelers being built for the new Detroit & Buffalo line, will be launched at the Wyandotte yards of the Detroit Ship Building Co., next Saturday afternoon. The work of finishing the Eastern States, which was launched early in January, is progressing rapidly at the Orleans street yard of the shipbuilding company, and the framework is nearly all in position and a large part of the machinery is in position.

Congressman Burton introduced a bill in Congress this week appropriating $45,000 for the construction of a lightship for service at Point Pelee passage. Senator McMillan of Michigan has introduced a similar bill in the Senate. A recommendation was made by Secretary Gage of the Treasury that an appropriation of $18,000 be made without delay for the construction of a lighthouse to indicate the entrances to the breakwater now nearly completed at Ashtabula, O. The lights at present in use at that port, the Secretary says, would not be adequate if placed on the new piers.

The old Sanborn elevator, the pioneer structure of its kind in Port Huron, was destroyed by fire last week. It had not been in use for nearly two years, but was just about again to be put into service, the Johnstone Menish Co. having leased it only a few days previous to the fire. The structure had been somewhat out of date, but had recently become of greater value, owing to the destruction of the several other elevators. It had a capacity of 80,000 bushels and was worth $20,000. There was no insurance on the building. This makes the fourth elevator to be destroyed by fire at that point within the past year and a half, the McMorran, Botsford & Sanborn elevators, in Port Huron, and the Grand Trunk elevator at Point Edward all being destroyed within that period. There is but one elevator now in operation in Port Huron.

The project for a double track channel in the "Soo" passage between Lake Huron and Lake Superior will be pushed before the Lake Carriers' Association, here this week. Strong resolutions calling upon the government to make this improvement will be presented and will doubtless be adopted by lake vesselmen in their yearly conference. The plan is a new one in navigation, but it has received the sanction of vesselmen generally as the only satisfactory solution of the problem in that great waterway. The project is to cut a new channel in the West Neebish, when one channel will be used for upbound boats, and the other for downbound. The dangers of blockades from collisions of passing ships would be thus done away with. At present a defective link in a wheel chain may at any time bring the vast volume of Lake Superior business to a standstill in the "Soo" passage. If adopted by the government, this will be one of the few double track waterways in the world and while it will no doubt require considerable work to bring about the wished for results, it is hoped that an appropriation can be secured to ensure the vast commerce of the west being regularly carried on during the season of navigation.

CLEVELAND.

Special Correspondence to The Marine Record.

Price McKinney, of Corrigan, McKinney & Co., has returned from a trip to the Mexican mines of the company. Capt. James Corrigan is still in Mexico.

The local branch of the International Seamen's Union met last Monday night and elected delegates to the lake district convention, which will be held at Chicago Jan. 27.

W. A. Osier, the western representative of the well known firm of Messrs. De Grauw, Aymar & Co., New York, manufacturers of Tyzack stockless anchors and cordage supplies, visited vessel men in Cleveland this week.

Mr. A. W. Horton, who has been appointed western agent for the Pittsburg Coal Co., with headquarters in this city, and who succeeds Mr. S. H. Robbins, arrived from St. Paul on Monday. Mr. Horton has been in the coal business for a number of years.

The new steel steamer for Frank Seither, will be launched at the West Superior yards of the American Ship Building Co., the latter part of January. She will be christened the G. J. Grammer by Mrs. George F. Clough. The new steamer measures 366 feet over all, 346 feet keel, 48 feet beam, and 28 feet molded depth. Steam will be furnished by two Scotch type boilers.

Captain W. W. Brown, manager of the United States Transportation Co., has selected names for the five steel steamers building for that company at the American Ship Building Co. The steamers A. G. Brower, H. S. Wilkinson, and W. W. Brown are building at South Chicago. The steamer Nottingham will be launched at Buffalo in a few weeks, and the steamer L. C. Smith will be turned out at Bay City. The capacity of the steamers range from 4,800 to 6,200 tons on eighteen feet.

The annual meeting of the Licensed Tugmen's Protective Association will be called here next Monday and the delegates will come from all the principal ports. The local members have completed arrangements for the meeting and the entertainment of the visitors. Capt. Harry Coulter of this city is in the lead for the office of president, which has been held by M. Ryan of Duluth since the organization of the Association. Mr. Ryan resigned to accept the position of chief engineer of the Great Lakes Towing Co.

The following meteorological observations are furnished by the office of the United States Weather Bureau for the week ending January 15: Prevailing wind directions for the week, west; highest velocity, 54 miles from the west on the 11th; mean temperature for the week, 28 degrees; highest temperature, 47 degrees on the 9th; lowest, 16 degrees on the 13th and 14th. Sunrise and sunset data computed for local time: January 17, sun rises at 7:25, sets at 4:56; January 20, sun rises at 7:23, sets at 5; January 23, sun rises at 7:21, sets at 5:04.

The roller lift bridge of the Big Four Railroad was used a day or two ago as a derrick. While being switched in the yards when the draw was lifted, a car filled with stone ran over the abutment and fell into the river. The rescuers started first to rig up a derrick on a scow in the river, but at the suggestion of Peter Lynch, the harbormaster, the roller lift bridge was used as a derrick, a rope being fastened around the ties and made fast first to the car and then to the stones. As the draw was raised the car and stones were easily lifted and swung to the abutment.

The Cleveland lodge of the Masters' and Pilots' Association will not join in the movement to separate the lake organization from the international body. Such a thing was recently proposed, and it was to have been discussed at the meeting in Washington early this month. The matter will probably be brought up, but there is little chance of it going through. Men who are informed claim that to do this it would require a radical change in the by-laws and constitution. The members say that such a step would make the lake organization essentially a union, which they have always tried to avoid.

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It is learned that one of the possibilities of the Washington meeting of the Marine Engineers' Beneficial Association will be the election of a vice president, who will be a resident of a lake city. He will be under pay and will devote his entire time to the interests of the lake marine engineers. One of the propositions is to have his headquarters located in Cleveland, since most of the vessel owners have their headquarters here. The reports do not say who this official is to be, but it will probably be an engineer who is active in the affairs of the union. There are several men who would no doubt accept the situation if it has accompanied an adequate salary, but it is too early to give their names as yet.

The marine cooks' union, local 55, has removed from No. 64 Michigan street, to the Atwater building. There will be an open meeting in the near future to which the friends of the union will be invited and a banquet will be served. Smokers will be held at different intervals throughout the winter. The association, which has been organized only one year, has a membership of 1,100 on the lakes. There will be held a conference of the different locals in February, at which matters of importance will come up for consideration and adjustment. The first regular meeting in the new rooms was held on Wednesday, Jan. 15. There was a large attendance and the meeting was considered a most successful one.

Although there is a hearing soon to be had on the question of the river bridges, to fix rules for their swinging, the complaints among the tugmen against the slowness of some bridges have not stopped. The old hand-operated bridge of the Big Four Railway at the Cincinnati slip is the one which is causing the greatest trouble, and those who have done any towing in the vicinity say that although the officials have been importuned to operate the bridges more rapidly and although injunctions to do so have been issued to bridge tenders, the delays are as great as ever. The channel of the river is to be greatly improved at the new roller lift bridge by the removal soon of the old pier upon which the machinery of the swing bridge rested. This will add sixty feet to the channel there. The establishment of the double lift bridge at middle Seneca street will also widen the channel.

At a meeting of the directors of the Great Lakes Towing company, this week, it was decided to add to the wrecking equipment of the company, three lighters furnnshed with modern wrecking appliances and a steel salvage steamer. The plans for these were discussed in a general way, and the work of preparing the specifications for the contracts will be begun at once. The work will proceed with all possible dispatch, as it is desirable to have all in readiness at the opening of navigation. The lighter designed for work in the Detroit River will be of steel, and have a displacement of 1,500 tons, making it one of the largest on the chain of lakes. It will be equipped with hydraulic derricks and clam-shell dredging buckets, and all of the gear used in the work of recovering sunken vessels. Two lighters already in the service of the company will be refitted and stationed at the "Soo." For work on the lakes a steel steamer of special design is planned. This also will have on board modern machinery for the work which she is expected to do.

Capt. J. C. Gilchrist was offered the presidency of the Lake Carriers' Association early this week. The captain stated that he could not possibly be a candidate, saying that he appreciated the honor highly and would much like to accept the position if offered, but he was forced to refuse to allow his name to be used. Mr. Gilchrist is the head of a large fleet of boats, and besides has banking interests in Cleveland that take up a great deal of his time. He says he fears very much that the little leisure which he would have from his other duties would be inadequate to give the Association the proper administration which the place deserves. He has asked his friends, therefore, to keep his name out of the convention. Mr. Gilchrist said that he would be favorable to the election of another Cleveland man, if the vessel owners should select one, but for himself it was out of the question.

MILWAUKEE.

Special Correspondence to The Marine Record:

The Milwaukee-Western Fuel Co., of Milwaukee, Wis., has distributed to its patrons and friends a beautiful telephone-list card, made of celluloid, as a reminder of its facilities for supplying coal in any quantity. Since its organization, in June, 1901, it has received 901,909 tons of anthracite and bituminous coal, out of a total of 1,638,480 tons received by the seven wholesale concerns now operating in Milwaukee.

Milwaukee will be well represented at the annual convention of the Lake Carriers' Association at Detroit to discuss and take action on important questions pertaining to shipping on the Great Lakes. The Milwaukee delegation left Tuesday evening and included the following: Capt. David Vance, of Vance & Co.: William H. Meyer, of the Milwaukee Tug Boat Line; Thomas Sheriffs, J. J. Merters and John Schlosser.

GOVERNOR'S MESSAGE, STATE OF NEW YORK.

THE CANALS.

A recent investigation of the canal system of the State has convinced me that a definite policy as to future expenditures should be determined upon by the Legislature. The removal of the restriction as to capitalization of corporations operating boats upon the canals seems to have been an important step in the direction of an improved system. One is impressed by the fact that the canals as at present conducted are sufficient for all local business, but if they are to be, as they have been in the past, a restraining power upon the freight rates of the railroads, then some policy to make them more serviceable to the community should be adopted. I do not believe the people of this State would sanction the expenditure of money for the sole purpose of making of our canal system a funnel for the traffic of the far west, and however desirable it may be to give the port of New York greater statistical results, not even this would warrant such expenditure. What we desire by the building up of our internal commerce is to attract capital by offering inducements to manufacturers, thereby giving employment to our people. The most serious obstacle to the consummation to this purpose is that the canals are absolutely closed for at least five months of the year. Therefore, for nearly one-half of the year manufactories are dependent upon the railroads. So long as the railroads are content to make rates which vary with the extent of trade, the shipper and the merchant are inclined to forsake the canal in favor of the road, which gives the surest and most constant service.

In treating of the question of exports from the port of New York and the discrimination by the railroads against that port, we must in all fairness consider the subject not entirely as the act of a railroad corporation which is desirous of returning dividends upon its stock, but we must look at our own shortcomings and seek a remedy for the condition of affairs at present existing. The railroads and the canals are at a parity at the beginning of the trip. Grain shipped from Duluth via the lakes to Buffalo is there elevated and loaded into cars and transported to New York or other ports, there again elevated or put alongside foreign vessels for shipment. All of this work is done by machinery, the property of the railroads, without any middlemen's profits. It is also possible when the shipment is made by railroad to issue a through bill of lading, which is negotiable. Not so, however, with the canal traffic. At Buffalo the canal boat owner must have his own boat put in its berth; he must pay elevator charges and insurance, and he must also pay the broker a price for obtaining his cargo; he must be put upon the canal with his loaded boat and then incur the expense of propulsion until he reaches New York City, where the docking facilities are inadequate and the same exactions made as at Buffalo. So that the result is that the cost to the canal boat owner is much greater than it should be, leaving him scarcely any profit. The railroads can go to Boston, Baltimore, Newport News and other ports and run their cars alongside of the wharves, obtain free storage and other facilities or discharge into the vessel without all of this intermediary work, which becomes very expensive. New York itself must act. It must make it possible for the railroads to have terminal facilities equal to those of other ports. It must make it possible for the canal boat owner to have equal consideration in the matter of dockage and other essentials. Were it not for the fact that imports follow to a great extent the line of exports, canal improvement would deserve but very little consideration. It is this phase of the problem which makes it important that New York City should take action for the protection of its foreign commerce.

The substitution of steam for old methods of propulsion is already an assured fact. Daily there may be seen upon the canal boats in convoys of six, and there is no reasonable doubt that the fleets could be increased to a still greater extent. So that the first step for modernizing the canal has already been taken.

Upon a railroad the weakest points, when the question of increased tonnage or traffic is under consideration, are the bridges. So too upon the canal, the first points to be strengthened should be the locks, both in the elimination of those that are unnecessary and lengthening those remaining for larger boats. In other words, in the consideration of this question due regard should be given to the possiblities of the future. From our present knowledge the ultimate and maximum enlargement could not exceed a twelve-foot canal, so that if all locks were rebuilt upon this line there would be no necessity for the consideration of that part of the problem should the expectation of those who favor a larger canal be fully met by the commerce of the future.

If the locks of the present canal were enlarged it would expedite traffic and shorten the time between Buffalo and New York. This lock enlargement, while aiming to provide for the future, would be of vast benefit at the present time.

I am informed by the State engineer that the cost of eliminating the locks at Cohoes and Lockport, and one or two other points, and the lengthening of all others, with the substitution of a modern system, including a new channel between the Hudson river and Rexford flats would be $13,694,540. The project of completing the canal to a nine-foot level might be pursued gradually, and boats built for a larger canal, if lightly loaded, would prove as serviceable, and would necessitate no great expenditure to take advantage of the increased load which might be carried as a result of the deeper canal. This would encourage canal boat owners to immediately begin the construction of boats of greater capacity, and make possible a more complete system than at present. The cost of increasing the depth to nine feet would be $15,076,936 in addition to the amount necessary for the improvement of locks.

By the enlargment of locks and the elimination of unnecessary ones, the total number on the main line of the canal would be reduced from 72 to 44. Under present conditions. a steamer propelling five consorts would transport to New York and return from Buffalo about 1,430 tons in 430 hours, being at the rate of about three, one-third ton per hour. With the canal completed in accordance with the nine million dollar act, one steamer propelling five consorts would transport 1,800 tons in 430 hours, being about four and one-eighth tons per hour, and with a steamer propelling five consorts, carrying 3,600 tons, with the locks enlarged the time would be reduced to 400 hours for the round trip, or about nine tons per hour. So that if the plan to deepen the canals alone was adopted, the fleet capacity would be increased 370 tons, and by the additional improvement of enlarged locks, the increase would be 1,800 tons for the same fleet, making the total increase load by the entire improvement 2,170 tons.

This practically would give an enlarged canal at about one-third the cost of the proposed twelve-foot canal, and would, in my opinion, answer all of the requirements of commerce for the present and immediate future.

It is well to understand, however, in the consideration of this question, that indirect taxation, except through a constitutional amendment, could not be applied to the extinguishment of the debt that would be created by such improvements. Therefore if advantage is to be taken of the increased revenues of the State, provision must be made by constitutional amendment.

I recommend, therefore, first, that the proposal to enlarge the locks to one thousand ton barge capacity, and to provide a nine-foot channel from the Hudson river to Rexford flats be submitted to the people as a separate proposition. Second, that the canal be deepened to nine feet on such portions as are now less than that depth, and that this proposition also be submitted to the people for their approval or disapproval.

The building of trolley lines along the highways has resulted in a great many of the canal bridges being used without any apparent attempt to hold responsible the companies using them, and with little regard to the strength of these structures. One of the results of such a policy was the serious accident in the city of Syracuse last year, for which a number of claims have been filed with the Court of Claims against the State. Such a policy is not businesslike, and it should be the duty to correct this wrong at the present session of the Legislature.

I recommend that authority to cross the canals by means of the canal bridges be revoked, and that new permits be issued only to such companies as will guarantee, first, the strengthening of the bridges, under the direction of the State Engineer and Surveyor, and secondly, that they shall assume responsibility for the safety of such bridges, as well as their future repairs.

Numerous bills are introduced in the Legislature each year making appropriations for the construction of new bridges acros the canals, and instances are not rare where apparently sound structures have been taken down and more expensive bridges substituted for them. I am of the opinion that no appropriations should be made for canal bridges excent upon the recommendation of the Superintendent of Public Works, and that he be given discretion to expend such appropriation wherever he may it necessary.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MICHIGAN.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., January 8, 1902.

GRAND HAVEN PIERHEAD LIGHT-STATION.

Notice is hereby given that, on or about January 15, 1902, a siren operated by compressed air will be established at this station, on the outer end of the south pier, entrance to the harbor of Grand Haven, easterly side of Lake Michigan, to sound, during thick or foggy weather, blasts of 3 seconds' duration separated by silent intervals of 37 seconds, thus:

Blast	Silent Interval	Blast	Silent Interval
3 Sec.	37 Sec.	3 Sec.	47 Sec.

This siren is to supersede the old steam siren and attention is invited to the difference between the characteristics of the new and old fog signal.

By order of the Light-House Board.

N. H. FARQUHAR,
Rear-Admiral, U. S. Navy, Chairman.

Capt. Donnelly has been gathering information touching the burning of boats on the Great Lakes, and finds that in the majority of cases fire was due to lamp explosion on account of the inferior grade of oil used.

LINES OF EQUAL VARIATION.

The following paragraphs are offered by the hydrographic office, U. S. N., for the benefit of careful navigators who seek for the most accurate data pertaining to their daily problems, as well as to clear up any misconceptions that may be extant regarding the degree of reliability with which lines of equal variation in general are to be accepted, when projected for vast oceanic areas within which there are few fixed points at which regular and continuous observations are on record:

The distribution of the variation of the compass over the North Atlantic and North Pacific oceans is shown on the pilot charts by curved lines passing through all spaces where there is the same difference between the direction of the true north and the direction of the compass needle when influenced by any attraction excepting the earth's magnetism.

Since the variation of the compass at any given place is not a fixed quantity, but is undergoing continual though small changes, due to the operation of causes that extend throughout centuries, the lines of equal variation of the compass shift into new positions with the lapse of time. When traced on maps of large scale, representing the details of accurately observed values resulting from a magnetic survey of a certain region, these lines are always serpentine in their courses from place to place and are characterized by many loops and bends which often diverge to the extent of a degree or so from the mean positions of the lines; and it must be understood that the variation curves shown on the pilot charts are average curves, and that occasional observations may not, therefore, check exactly with the values represented by them.

When the average lines of equal variation of the compass are drawn over an expanse of ocean for a certain epoch, they may be taken to hold good for purposes of navigation during a few years from that epoch, because the uncertainty introduced by their shifting under the operation of the annual secular change, which is rarely greater than 10 minutes, and generally much less, is swallowed up in the greater uncertainty due to the erratic departure of the actual line of equal variation from the average curves.

The pilot chart variation curves are drawn for the epoch 1900, and in view of the small scale of these charts and the generality with which the curves are drawn, they may be considered as substantially representing the distribution of the variation of the compass over these oceans for several years to come.

The difficulty of making precise observations of the variation of the compass at sea, the sparseness of the observations, and the remoteness of the period when many of the observations were taken, all conspire to render it inadmissible to attempt to represent the variation of the compass on the great oceans in any greater detail than can be shown by the average curves employed on the pilot charts.

As far as the open ocean is concerned, but few reliable observations for the variation have been taken since the epoch when navigation in iron-built vessels became general. So that the variation charts of the present time show very nearly the same lines of equal variation of the compass as would have resulted if a chart maker in the days of wood-built ships had predicted the changes that would occur between that period and the year 1900 in the values of the variation of the compass in different parts of the oceans of the globe, and, applying them to the variation lines of that period, had brought out a chart for the present time. Such a chart of variation lines would have had involved in it uncertainties to the extent of a degree or two, due to predicting values beyond the limit of time during which predictions can be safely made in the present state of our knowledge; and this is pecisely the amount of uncertainty which exists in the variation charts of the present time, for they have been brought forward from the time when observations for the variation of the compass were made in wood-built ships, and with but few advantages over what a chart maker of that period could have employed in carrying the lines forward into their positions for the present time. The uncertainty of a degree or two in the values of the variation of the compass, as indicated by the variation lines on ocean charts, must not be forgotten in laying down magnetic courses, nor must the gradual change in the variation escape attention in laying down positions by bearings on charts. The magnetic compass diagrams placed on charts for the purpose of making plotting easier, become, in time, slightly in error, and in some cases, such as with small scales, or when the lines are long, the error in the plotted position from negect of this change may be of importance.

An application will be made to the Parliament of Canada at the coming session for an act to incorporate a company to construct a cut-off canal between Lake St. Clair and Lake Erie. The proposed canal is 13½ miles long, through low land, with the underlying rock more than 20 feet below the bottom of the deepest cut. The waterway is to have a width of 156 feet on the surface and 72 feet on the bottom, with a uniform depth of 21 feet. There would be a saving of 79 miles in distance for vessels bound up or down the lakes, and of six or seven hours in time, and the strong current and dangerous Lime Kilns Crossing of th Detroit river would be avoided. A speed of 6 miles an hour through the canal could be maintained. The estimated cost is not stated.

SEAMENS' WAIVERS.

Hughes' "Handbook of Admiralty Law," p 21, ascribes the importance of "The Contracts of Seamen," and the attention given to them by courts, not to the dementia of the "skillful hands" that should "manage complicated machinery," but to the need of having a ship "intelligently handled," "the man behind the gun formidable;" saying that "on this account the utmost encouragement to seamen" is "the established policy of the law." Hence it is that "as the courts have been liberal in the construction of the word 'ship,' they have been equally so in deciding what constitutes a 'seaman' in the modern sense. The term is not limited to those who actually take part in the navigation of the ship," and Mr. Hughes refers to section 4612 R. S., as defining a "seaman" to be "every person who shall be employed or engaged to serve in any capacity on board" any vessel; and adds, p. 23: "In order to protect a seaman from imposition, the statutes render void any agreement by him waiving any remedies for his wages."

The duress of persons under command, rather than their ignorance, the secret menaces against them by influences invisible and powers dark—are greatly responsible for much of the principle. It is interesting to know that even Rear Admiral Schley, though counselled by Maryland's Attorney General, was recorded by the Court of Inquiry as entitled to rights of a seaman. The entry was in what was cipher to the uninitiated, and has a history.

President Andrew Jackson sent this message to the Twenty-Third Congress: "To the Speaker of the House of Representatives: I submit for the sanction of Congress proposals approved by me. These, if adopted in the form of laws, appear well suited to the present and future exigencies of the Navy. Proposal No. 5, Sec. III. 'Under the existing law it has been decided that if from any cause the number of members of a court martial who may assemble on any day after the proceedings are commenced are less than five, the court is by that fact dissolved. It is proposed to allow a smaller number to adjourn from day to day for a certain time, as in many cases it might be highly useful'"—No. 545, H. R., 23rd Cong., 1st Sess. This "existing law" designated a legal trial as one which consisted of at least five members who sat "from day to day, Sundays excepted, until sentence" was "given" (Art. 39 and 45, Sec. 1624, R. S.) If such a trial was not given the accused, or if he was not present at such a trial, no sentence against him was valid. But not even for Andrew Jackson would Congress change the law. Hence we find in the Navy Regulations of 1865, p. 225, the paragraph (1238) that "if from any cause, after a court shall be sworn, the member or members required by the law to form a court shall not assemble on the day to which the court was adjourned, and the court, by that fact, should be dissolved, the proceedings up to the period of dissolution and the fact of the dissolution itself, must be transmitted," etc. The object of this peculiar statute was stated at length in the N. Y. Maritime Register of October 16, 1901, under the title "Interesting Old Records in Washington Libraries,"—typographical errors of which article will be found corrected on page 10 of Oct. 23d's issue. It was designed to secure not only a "speedy" but an "impartial" trial; 6 Op. 207. From the time a naval court is summoned and its members announced, they are at least liable to be the target for secretly given hostile aspersions and uncrossexamined, unsworn testimony against an accused, quietly poured into their ears by perhaps well-meaning persons. If they may disperse and delay proceedings at their option, the opportunities become greater for insidiously whispered tales. So slight a delay as a day may thus make the difference between acquittal and conviction, life and death, to some accused. Hence Hickman on Naval Courts Martial, p. 29, says that "the adjournment of the court over one day would render the sentence void." When members are pressed to hasten their proceedings, to keep at work, their attention is engaged and the chances for outside testimony is reduced to a minimum. By confining their attention to the trial daily, some security is gained against any tampering with the jury.

There is a subtle meaning in the record of the Schley Court of Inquiry, that the "members thereof assembled daily since Monday, November 11, with the exception of Sundays," etc., while "deliberating" This entry was made by the Judge Advocate Lemley, (Art. 58, Sec. 1624, R.S.) whom the N. Y. Maritime Register of Oct. 16, 1901, told that the Barron Court of Inquiry in 1807 testified to its wish to be fair by a similar entry. The same treatise told him also of the "Memorial" of Midshipman F. Green, in 1830, to the Twenty-First Congress; Green's court martial got jurisdiction over him December 5, 1827, because, so said its "minutes," it "convened November 1, 1827, pursuant to a warrant of the Secretary of the Navy, and was continued by adjournment from day to day till the 5th day of December." On December 5 Green was arraigned, being tried until December 7. The recital that jurisdiction was attained on December 5, 1827, only by daily continuances from November 1, was approved by President John Quincy Adams (American State Papers, Naval Affairs, vol. 2, p. 133; vol. 4, p. 530.) But this statute governs only courts martial—which "try" and "sentence," not courts that merely "examine and inquire," (Art. 40, 58, Sec. 1624, R. S.) With President Dewey's court it was only a common law duty, so to speak, to hold daily sessions. Yet, notwithstanding its most irksome sittings, the besieged of the vociferous bombardment from September to "November 11" never asked Schley to waive "daily assemblies," to give it a vacation, and no one even suggested that he could do so. Schley's right was a seaman's right, the right of a man under known and unknown duress, and what he might yield to did not count.

How little appearances do count in support of a seaman's alleged waiver, how little possibly superior intelligence in the seaman should avail, is illustrated in a case where a naval court martial lost jurisdiction by running off the track of this Art. 45, Sec. 1624, R. S. The accused, M., an officer, was absent throughout the whole of one day's session of the court, while it was "proceeding" in his "case" only. That session was entitled on the record as the "Twelfth Day" "of the proceedings of the general court martial convened in the case of" M. If the court had demanded M's presence he would have been present. The session was necessary to the continuity of the court's jurisdiction. This, the record confesses; for it omits to record more than the bare meeting of the members, at inconvenience to them all, at the early, unusual, unofficial, non-jurisdictional hour of 8 a. m. This session (like the remainder of the proceedings against M) was held in a chapel of a navy yard, while M. was kept in arrest nearly a mile and a half away on a receiving ship. By colliding with the breakfast hours of the provost martial and M., and necessitating an earlier rising than usual and long abstinence from breakfast (until return from the 8 a. m. meeting) M's health, then fragile, might have been shocked or impaired possibly so seriously that he could not attend to his "defense," which the court required him to prepare that very day. The earliness of the meeting was caused by an insufficient excuse—the desire of some of the members for an idle outing trip on a steamboat. It cost M. his presence at the trial and the pleasure of an after-breakfast three-mile walk in the fresh air. He certainly did not assent to all this. Had he filed a written protest the resultant, ugly mood of members deprived, by the record's exposure, of a pleasure jaunt, could not have helped his cause. No other protest of his was recorded than this: "Eleventh Day. At the request of the accused the President then said that the accused would be excused from attending the meeting tomorrow." Were absence of an accused from any session permitted "other charges" than those within the jurisdiction of the court as defined by Art. 43, Sec. 1624, R. S., might be "urged," charges unwritten and unrecorded on the ground that they were "interlocutory questions" (Sec. 270 of the regulations designated in 116, U. S., 180). A sentence might be partly or wholly founded on such. In Weirman vs. U. S. 36 Ct., where the petition showed that Weirman, a landsman in the navy, was "absent during the whole of one day's proceedings in his case," the Court of Claims contributed this to the law of seamen's waivers:

"The petition, probably with intent to put the whole case before the court, concedes that the claimant and his counsel (who was a naval lieutenant) would have been permitted to be present had either applied for leave, and that neither objected to the absence of either, and neither was present; that the assembling of the court martial on that day was otherwise in conformity to order. The question therefore, presented, is whether the absence of a prisoner or his counsel for one day during the sitting of a court martial without request to be present or objection to the court's sitting without the presence of the prisoner renders the sentence of the court void." Citing various decisions the Court held that it was void where the accused was charged with disobedience in supposed violation of Art. 4, Sec. 1624, R. S., and liable to be sentenced as provided by that statute. This is the law governing proceedings for breach of statute, but as a seaman's status approaches that of a person under arrest, such a decision as that of Crain vs. U. S., 162, U. S. 644, is pertinent. This reads: "In Hopt vs. Utah, 110 U. S., 579, this court, observing that the public has an interest in the life and liberty of an accused, said; 'that which the law makes essential in proceedings *involving* the deprivation of life and liberty, cannot be dispensed with or affected by the consent of the accused.'"

GEORGE F. ORMSBY.

Washington, D. C.

EASTERN FREIGHT REPORT

Messrs. Funch, Edye & Co., New York, report the condition of the Eastern freight market as follows:

There is no special feature regarding the freight market, rates in all directions remaining practically the same. The list of cotton charters this week shows a larger volume of business, but the rates accepted in most cases are without change. Charterers do not show any disposition to take up any further tonnage for January loading, and with the cotton season drawing to a close, we do not anticipate much further tonnage. The transactions reported for coal cargoes show an increase, but the fixtures advised in this issue are mostly for West Indian ports, and doubtless are to cover contracts made ahead.

Another fixture for case oil is reported for Bombay, but the rate accepted, viz.: 15c. is on the basis of previous charters. Business from the Gulf remains stagnant, and there is little or no demand on the part of shippers to make further commitments.

There is no business of any consequence for sailing vessels in our market, which continues slack, and as the supply is considerably in excess of any likely requirements, rates are barely quotable.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.

Damages.—Libelant shipped as seamen for a voyage to Alaskan ports and return. On reaching a port in Alaska they refused to further perform their contract, and announced their intention to leave the vessel on the ground that she was unseaworthy and unsafe. The master procured a warrant from the commissioner, under which libelants were arrested and imprisoned until the vessel left, when they were returned on board. They served during the remainder of the voyage, and were then discharged and paid in full. They were, in fact, not justified in their attempt to quit the vessel, and the master acted in good faith and under legal advice; neither he nor the attorney having knowledge that the law permitting such procedure had been repealed. Held, that under the circumstances, libelants would be awarded $10.00 each as damages for their illegal imprisonment. The South Portland, 111 Fed. Rep. (U. S.) 767.

Injury to Servant.—Negligence of Fellow Servant.—Plaintiff was fireman on defendant's steamboat, and while at work the water gauge became cracked. On discovering it, the engineer directed plaintiff to turn the valves and shut off the water, and while doing so plaintiff was injured by the explosion of the gauge. The glass was not apparently defective, and it was shown that gauges were liable to break at any time, in which case the engineer made repairs by taking out the broken glass and substituting a new one, a supply being kept on hand for the purpose. Held, That the duty of making repairs of such character was not one which devolved on the master, so as to make the engineer defendant's representative in making the same, but was one of the ordinary duties of the engineer as a servant, and that his negligence in directing plaintiff to shut off the water without warning him of the danger was that of a co-servant, for which defendant was not responsible. Manning vs. Genesee River & L. O. Steamboat Co., 73 N. Y., Supp. 677.

Carriers—Insufficient Accommodations of Steamship—Action for Death of Passenger.—Libelant's intestate purchased tickets for passage, meals, and berths for himself, wife, and daughter on respondent's steamship from a lake port in Canada. On presenting them, he was told that berths could not be furnished, not having been reserved, and the vessel having an extraordinary number of passengers, owing to its being the close of the summer season, when an unusual number of passengers were returning from the lake resorts. He insisted on going, and was then told that if he would accept a cot or mattress for himself, his wife and daughter would be furnished with a berth. He accepted the offer, and the officers procured a number of mattresses from a dealer, one of which he took, and on which he slept. On reaching port the next morning, he was taken with a chill, which developed into pneumonia, from which he died a few days later. Suit was brought under the Canadian statute giving a right of action for wrongful death, it being alleged the death was caused by the dampness of the mattress; no claim being made on the ground of breach of contract. Held, that under the facts shown, respondent was not chargeable with negligence, the officers of the vessel having done all that was reasonably possible to meet an extraordinary emergency, but that in accepting the accommodation offered, with knowledge of the conditions existing, deceased assumed whatever risk was involved. Van Anda vs. Northern Nav. Co. of Ontario, Limited, 111 Fed. Rep. (U. S.) 765.

Excessive Speed in Fog.—The steamer George W. Roby, going up Lake Huron in a dense fog, heard fog signals some three miles ahead, which proved to be from the Florida passing down. She checked speed to four or five miles, which the evidence tended to show was not as low as she might have reduced and maintained steerageway. She continued to hear the fog signals, which were approaching and apparently keeping the same bearing, from one to three points off the port bow. When the vessels were some half a mile apart she blew two passing signals, of one blast each, at intervals, which were unanswered, and she then blew an alarm. There was a confusion of signals, but a passing agreement of two whistles was finally established, each vessel thinking such signal first came from the other. The Roby, on answering the supposed passing signal from the Florida, starboarded and reversed her engines, but had not lost her headway when she struck the Florida and sunk her. The Roby had a lookout, but he was not on duty, the only lookout being the master on the pilot house, who was also engaged in navigating the vessel, giving the signals, and blowing his fog whistle by hand. Held, that the Roby was in fault, (1) for not reducing speed to bare steerageway, as required by Rule 15, (2) for not maintaining a proper lookout, and (3) for not stopping and reversing, at least as early as the time when her second passing signal was not answered; since the fact that the bearing of the Florida as the vessels approached each other apparently remained unchanged should have advised the master that her course was drawing nearer his own, and that in proceeding he was running risk of collision. The George W. Roby, 111 Fed. Rep. (U. S.) 601.

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CLEVELAND, O., JANUARY 16, 1902.

PILOTS' LICENSES.

The American Masters and Pilots' Association during the annual session at Washington this month is going to bring several matters of importance to the attention of Congress, and hopes to bring about radical reforms in one or two directions.

The one chief matter which will receive attention at the hands of the Masters and Pilots' Association will be that of the revocation of pilots' papers by the local inspectors at the various ports both on the lakes and on the coasts.

As matters now stand revocation of a master's papers rests with the local inspectors, and papers have been suspended in instances from three to six months and the captain is out of a job for that length of time without having been given a hearing aside from that granted by the local inspectors.

It is now intended to have this changed and an effort will be made to have the Secretary of the Treasury adopt a plan whereby a master, when complained of, may have a hearing before a jury of masters or pilots. In several instances where papers have been suspended by local inspectors, the limit of the suspension has expired before the appeal to the Secretary of the Treasury has been reached. It is considered ridiculous for such power to be placed in the hands of ordinary local inspectors of steam vessels.

A NATIONAL CANAL.

The project of giving a national aspect to the Chicago drainage canal, making it a link in water connection between the Great Lakes and the Gulf, was considered this week at Washington by the House Committee on Rivers and Harbors. Two delegations from Chicago were present, one including the officers of the sanitary district interested in the larger project and another headed by Ex-Representative Adams, of Chicago, who appeared in advocacy of improved navigation facilities, including turning basins in the Chicago river.

The project was first presented by Mr. Adams, who explained the vast magnitude of the commerce on the river and the difficulties and dangers incident to navigation at this time. Chicago is making extensive improvements, widening the channel, erecting the most modern bridges, etc., costing in the aggregate about $11,000,000. All of this benefitted the general navigation interests, and it was desired that the federal government supplement the work by providing turning basins to cost about $500,000.

W. H. Barker, chairman of the committee representing the canal trustees, stated the general purposes of the project of extending that waterway to the Mississippi and thence giving a deep water channel to St. Louis. For the present the committee asked only a government survey to develop the feasibility and advantages of the plan, this survey to cost $200,000. Mr. Baker did not go into the general merits of the project, saying that the arguments were the same as those so fully presented last year.

Chairman Burton stated in this connection that the members of the committee personally examined the project last summer and were familiar with its general features.

Mr. Reeves, of Illinois, also stated that the members of the committee were personally familiar with the situation and that this obviated the necessity of a long hearing.

At a later day the committee will pass upon the two items proposed.

DEPARTMENT OF COMMERCE.

Mr. Nelson, of Minnesota, called up in the Senate on Monday the bill providing for the establishment of a department of commerce. He explained the necessity which, he said, existed for the passage of such a measure, and was plied with questions by several senators who are looking into the merits of the measure. Mr. Teller criticised that feature relating to the transfer of the geological survey, while Mr. Hale said that the bill provided for a department which ultimately would be one of the largest in the government. The bill finally went over, subject to call by Mr. Nelson.

INCREASE OF 1901 BUSINESS OVER 1900 THROUGH THE CANADIAN LOCK.

The report of the superintendent of the Sault Ste. Marie canal shows considerable increases in the vessel tonnage and freight passing through the lock this year as compared with last year. The statement is as follows:

	1900	1901	Increase
Number of vessels	3,081	4,204	1,123
Vessel tonnage	2,194,784	2,449,748	255,000
Freight tons	2,036,677	2,520,394	584,717

STATEMENT OF BITUMINOUS COAL MINED IN OHIO.

[From report of the Ohio Coal Traffic Association.]

RAILROADS.	November 1901.	Eleven Months ending November, 1901.
	Net Tons	Net Tons
Hocking Valley Railway	368,222	3,377,782
Toledo and Ohio Central Railway	179,654	1,814,790
Baltimore and Ohio Railway	106,344	949,868
Wheeling and Lake Erie Railway	174,963	1,463,022
Cleveland, Lorain & Wheeling Ry	146,445	1,307,315
Columbus, Sandusky & Hocking Ry	77,760	878,033
Toledo Division, Pennsylvania Co	96,943	921,727
Total	1,150,331	10,712,537

NEW LIGHT-HOUSE FOR ASHTABULA.

Secretary Gage has transmitted to Congress a recommendation that the sum of $18,000 be appropriated immediately for the construction of a light-house to indicate the position of the new breakwater soon to be completed at Ashtabula, O. The Secretary points out that the lights now in use at that port are not of sufficient candle power to warrant their removal to the new pier heads.

THE Senate Committee on Commerce has favoraby reported a bill providing for the reciprocal recognition of certificates of steam vessel inspection between the United States and other countries. The bill is intended especially to facilitate intercourse by water with Canada, but its provisions are made general in order to make it apply to all nations having inspection laws similar to those of the United States.

A BILL providing for a storm warning station for South Manitou Island, Lake Michigan, and a light-ship for Southeast Shoal, Lake Eric, was reported this week from the Committee on Commerce.

ANNUAL MEETING OF THE DRY DOCK ASSOCIATION.

The Dry Dock Association of the chain of lakes held a meeting Tuesday morning at the Colonial Hotel, Cleveland. This was the annual gathering of the men who control the plants on the chain of lakes, and the purpose was to fix on some scale of rates that shall apply through the coming season upon all work which is presented to the plants. Vessel men have been interested in this meeting since there was a possibility of a change of basis, but the drydock men gave no intimation of such a design in the meeting, as the price list of last year was reaffirmed without a single change and will prevail through the season.

No statement of the amount or expensiveness of the work was made at the meeting, but it is known that the season just closed was probably the most successful, for the drydock men, on record, which is easily understood, the great increase in the tonnage of the lakes being understood. The haste, however, in moving the craft during the year and the storms and low water caused a good many groundings that made smaller or greater losses almost constantly in evidence, requiring in consequence the assistance of the drydock to put the boats in condition for another voyage. The business, therefore, was brisk, which being the case, the drydock men were not disposed to make any change in prices which would be burdensome to the vessel owners.

The annual election was held resulting in the choice of the following: President, J. C. Wallace, Cleveland; first vice president, Edward Smith, Buffalo; second vice president, W. W. Watterson, Chicago; secretary and treasurer, James E. Davidson, Bay City.

THE NEXT CUP CHALLENGER.

If reports are true, Wm. Fife, of Fairlie-on-the-Clyde, is to build Sir Thomas Lipton's next challenger for the American cup. At a conference recently held between Sir Thomas and his advisers, definite arrangements were made for the construction of Shamrock III., and an order for the new yacht was given to and accepted by Mr. Fife.

In view of the probability of a big revival of British yachting, and the fact that designing and superintending a cup challenger necessitates constant work for at least a year, Mr. Fife was disinclined to accept the contract, but Sir Thomas found means of overcoming his objections.

Mr. George L. Watson has promised to assist Mr. Fife in every way, by handing over to him the details of the construction of Shamrock II., and all the calculations and details of the tank experiments made at the Denny's yard. With these and the experience gained with Shamrock I., Mr. Fife starts with a distinct advantage over his first efforts. It is understood that Mr. Fife is already collecting material and will commence designing Shamrock III. as soon as the boats now on hand for the next British yachting season are fairly started, which, probably, will be at the end of this month. Shamrock III. is to be ready early in the spring of 1903.

FIREPROOF WOOD IN THE UNITED STATES NAVY.

It appears to have been settled at last that the use of fireproof wood, at any rate in the United States Navy, will be very much restricted. In the recently issued annual report of Rear-Admiral Francis T. Bowles, Chief of the Bureau of Construction and Repair, it is stated that the bureau, after having conducted an exhaustive investigation of the qualities of fireproofed wood produced by two different processes, has found that while the products of both processes have desirable qualities in rendering wood uninflammable, they fail to show all the desiderata of a fireproof wood, which include the permanent retention of the ingredients under all climatic conditions, freedom from corrosive properties, and unaltered strength and durability. The experience of vessels in commission fitted with fireproof wood, as well as the tests conducted by the bureau, showed that there was no practical advantage gained by the use of fireproofed deck planking, or by the use of fireproofed wood below protective decks, and also that owing to the absorptive qualities of this wood its use was objectionable in those locations. Hence the United States Navy Department has dispensed with the use of fireproofed wood in the navy, except for such necessary joiner work as may be used above protective decks and on torpedo boats.—Cassier's Magazine for January.

ANNUAL REPORT OF THE BOARD OF MANAGERS LAKE CARRIERS' ASSOCIATION.

OFFICE OF THE LAKE CARRIERS' ASSOCIATION.
BUFFALO, N. Y., January 4th, 1902.

To the Members of the Lake Carriers' Association:

The Board of Managers submits herewith its Annual Report, as follows:

MEMBERSHIP AND TONNAGE.

The tonnage enrolled in the Association during the past year was 874,203 tons, an increase of 32,000 tons over the previous year. Considering the unusual conditions which prevailed at the opening of navigation last year, and which prevented some fleets that have always been members of the Association from coming in this season, the increase in tonnage makes a very gratifying showing, particularly as last year's tonnage showed a large increase over all preceding years. The following table shows the tonnage of the Association for a series of years, beginning with 1894:

1894	590,000 tons.
1895	618,000 tons.
1896	722,863 tons.
1897	687,237 tons.
1898	686,014 tons.
1899	760,866 tons.
1900	842,248 tons.
1901	874,203 tons.

In analyzing the tonnage figures for 1901, we find that of the total tonnage of 874,203 tons, 682,330 tons were made up of vessels of over 1,400 tons, paying the higher rate of dues, and only 191,873 tons were made up of vessels of less than 1,400 tons, paying the lower rate of dues. Every year the percentage of large vessels increases, in accordance with the well known conditions which are revolutionizing the character of the freight carrying vessels on the lakes. The fleets composed entirely of vessels below 1,400 tons only furnished 55,812 tons to the total tonnage of the Association, as compared with 87,999 tons of the previous year. The fleets of small vessels now only make up about one-sixteenth of the total tonnage of the Association.

The past season has also been remarkable for concentration of ownership. The fleets of the United States Steel Corporation and J. C. Gilchrist now make up about forty-four per cent of our tonnage. An unusually large tonnage, principally of the larger class of vessels, is now in course of construction, and the Association may therefore look for a considerable increase of tonnage next year.

FINANCES OF THE ASSOCIATION.

The annual report of George P. McKay, treasurer of the Association, which is submitted herewith, is unusually interesting. It shows that the receipts and disbursements during the past year have been upon a much larger scale than in former years. Thirty-three thousand dollars worth of dues have been collected during the past year, as compared with $26,000 collected during the previous year. The treasurer's report also shows the receipt of one item of $12,816.14 being profit made by the operation of the grain shoveling at Buffalo during the season of 1900. The treasurer reports all bills paid and a balance on hand of a little more than $1,000.

One of the items of the treasurer's report shows the receipt of $1,675.00 from the United States Light-House Board, being a semi-annual payment to the Lake Carriers' Association for maintenance of lights in the lower Detroit river. This covers the half year from July 1st, 1901, to January 1st, 1902. A like amount will be due from the Light-House Board on July 1st, next, for the maintenance of the service during the navigable season in the first half of 1902.

Following the precedent of last year, the treasurer's report contains no information in regard to the grain shoveling at Buffalo during the season just closed. A full detailed report from the Grain Shoveling Committee will be submitted by its chairman, showing the financial transactions in connection with grain shoveling during the season just ended. The amount of grain received at Buffalo during the past year was somewhat smaller than in the previous year, and the price of shoveling was reduced five cents per thousand bushels. The grain shoveling, therefore, will show but a small profit as compared with the previous year.

OPERATIONS OF THE SHIPPING OFFICES.

Shipping offices have been maintained during the past year at Cleveland, Chicago, Toledo, Buffalo, Ashtabula, Milwaukee, South Chicago and Conneaut. This list is the same as in former years, except that the Conneaut office was maintained for the first time last season. The total number of men shipped during 1901 through all the offices was 16,766 as compared with 14,987 in 1900 and 16,681 in 1899. The number of men shipped through each office as compared with 1900, was as follows:

	1901	1900
Cleveland	3,567	3,354
Chicago	2,228	2,515
Buffalo	2,233	2,110
Ashtabula	2,320	2,289
Milwaukee	1,881	1,773
Toledo	1,012	1,138
South Chicago	1,974	1,828
Conneaut	1,551	

Owing to unusual conditions prevailing in the early part of the season, and the addition of a new shipping office, the expense of maintaining the shipping offices shows a considerable increase over the previous year. In addition to the regular expenses, including the salaries of shipping masters, rent, telephone and office expenses of the various shipping offices, which amounted to $12,463.11, there were extra expenses incurred by the shipping masters during the spring of last year, amounting to $2,035.80, which brings the total cost of the shipping offices up to $14,498.91, as compared with $11,322.67 during the previous year, or about forty-four per cent. of the total income of the Association for dues, as compared with forty per cent. in 1900. This increase in the cost of shipping offices during the past season was unavoidable. For any explanation thereof desired by any member of the Association, such member is respectfully referred to the treasurer. It is expected that during the coming year such extra expenses will not be incurred and the cost of the shipping offices will return substantially to the figures of 1900, allowance of course being made for the establishment of the Conneaut office.

GRAIN SHOVELING AT BUFFALO.

The grain shoveling at the port of Buffalo has been done during the past year under the supervision of the Grain Shoveling Committee appointed at the last annual meeting, consisting of the following members of the Association: Messrs. Edward Smith, W. C. Farrington, M. M. Drake, C. A. Brunn, A. W. Colton, L. C. Waldo, A. B. Wolvin, H. Coulby, James Corrigan and D. Sullivan. On account of his residence at Buffalo, Mr. Edward Smith was made chairman of the sub-committee, having immediate charge of the work. The work has again been done under the superintendence of Thomas W. Kennedy. For a more detailed account of the operations at Buffalo in this department, reference is made to the detailed report which will be submitted at this meeting by the chairman of the Grain Shoveling Committee.

PRIVATE LIGHTING IN 1901.

One of the most important features of the Association's work during the past year has been in connection with the maintenance of private lights. For about fifteen years the vessel owners on the lakes have been maintaining a system of private lights in the lower Detroit river at their own expense. These lights were situated either on Canadian soil or in Canadian waters. Inasmuch as the United States government could not construct or own lights on the Canadian side of the boundary line, an effort was first made in Congress two years ago to secure an appropriation which the Light-House Board could use for the purpose of contracting with the Lake Carriers' Association for the maintenance of these lights. During the session of 1900 this appropriation was inserted in the Sundry Civil Bill in the Senate but was stricken out in conference and failed. Last season the effort was renewed, and with the assistance of Senator McMillan, and Senator Hanna and Congressman Burton, provision was made in the Sundry Civil Bill for placing a small sum of money in the hands of the Light-House Board, which could be used to take care of these private lights. A contract was entered into between the Light-House Board and the Lake Carriers' Association for the maintenance of the lower Detroit river lights, by which the Lake Carriers' Association agreed to maintain them during the navigable season from July 1st, 1901, to July 1st, 1902, at the price of $3,350.00, payable in two semi-annual installments. On January 1st, 1902, the first installment of 1,675.00 was received from the Light-House Board, as shown in the treasurer's report. This practically relieves the Association of the expense which it has borne since its organization for lighting in the Detroit river, and the members of the Association are to be congratulated that a way has at last been found to have these essential lights taken care of at government expense. It has never seemed a reasonable proposition to vessel owners that the United States government should construct a channel like the Limekiln Crossing, at an expense of a million dollars, and should then leave this most important and difficult of the lake channels to be lighted by the individual effort of vessel owners. It has taken a long time to bring about the desired result, but it has at last been accomplished. Provision, however, for these lights is made in the form of an annual appropriation in the Sundry Civil Appropriation Bill, and care must be taken during the present and future sessions of Congress to see that that this provision is not forgotten or left out of the bill; otherwise the expense will again be saddled upon vessel owners. The thanks of the Association are especially due to Senator McMillan for his invaluable services in this matter.

While the Association has thus been relieved of one important item of private lighting expense, it has found itself confronted with a new lighting project, which has occupied the attention of the Committee on Aids to Navigation during the past year. Numerous accidents and detentions in the vicinity of South-East Shoal, Lake Erie, brought an imperative demand from the members of the Association that this shoal should be properly lighted. At a meeting held in Cleveland a committee, of which Capt. George P. McKay was made chairman, was appointed to charter a suitable vessel, fit her out as a light-ship and station her at South-East Shoal. Capt. McKay's associates on this committee were as follows: Messrs. H. Coulby, Edward Morton, William Gerlach and W. W. Smith. Acting with the authority thus conferred upon them, this committee chartered the schooner Smith and Post and fitted her out as a light-ship, at an expense of about $1,840.00. The light-ship was located at South-East Shoal and was on her station only a short time when it was entirely destroyed by fire. The matter was then taken up again, and at a meeting of the executive committee of the Association, the committee having the matter in charge was authorized to purchase the steamer Kewaunee at the price of $10,000. This vessel was purchased out of the fund made available out of the profits of the grain shoveling of 1900. A considerable amount of money had to be expended to fit out the new boat properly for the service, the cost of such fit-out being $3,742.14. This includes about $500 paid to the Light-House Board for lanterns belonging to the government. Our certified check for this amount will be returned to us when we return the lanterns in good order. In addition to the cost of fitting out the vessel, the expenses of the committee in looking up suitable vessel, the wages of the crew, fuel, provisions, etc., required about $1,700 additional. The annual cost of maintaining this light ship, including the services of the crew, fuel, provisions and a reasonable allowance for repairs and maintenance, is estimated at $3,500.00 a year. An effort should be made during the present session of Congress to increase the amount rendered available in the hands of the Light-House Board for private lighting, so that the Board can contract next season with the Association for the maintenance of this light ship as well as for the lights in the lower Detroit river. We do not anticipate that there will be any great difficulty in securing this provision in the Appropriation Bill or inducing the Light-House Board to enter into a contract with the Lake Carriers' Association to maintain this light-ship until a government light is stationed at the shoal.

As soon as the Association decided that a light at South-East Shoal was necessary, the matter was taken up by the executive officers of the Association with the Light-House Board, with a view to securing a government light at this point. The Board ordered an investigation by the district officers of the Tenth Light-House District, who reported in favor of a government light-ship, preferably built of steel. This report has been approved by the Light-House Board and a communication, recommending an appropriation of $50,000 for a steel light-ship has been transmitted by the Treasury Department to Congress. A bill has been introduced in the United States Senate by Senator McMillan and the matter in the House of Representatives is in charge of Representative Burton, of Cleveland. It is important to the Association that favorable action on this matter should be obtained by Congress at this session.

In one respect the Lake Carriers' Association light-ship has served as an admirable model for the light-ships in the government service. The vessel remained on her station until December 17th, when the last boat belonging to the Association had passed.

Before concluding reference to the lighting service on the lakes, attention should be called once more to the early closing of some of the important light stations of the government on the Great Lakes. The officers of the Association had this matter up with the Light-House Board in connection with the closing of the Passage Island Light Station. Public announcement was made in November that this station would close on November 25th. As soon as this announcement was made the Lake Carriers' Association requested the Light-House Board to keep the station in operation until the close of navigation. Considerable correspondence with the Board and with Com. Wilson, Inspector of the Eleventh Light-House District, followed, with the following result: The Board reported that they were unable to keep the station open any later than the date advertised for closing, unless the Lake Carriers' Association would make a clear guarantee to remove the keepers from the station, and that this guarantee should be of such a character that there would be no doubt of our ability to carry it into effect. At a meeting of the executive committee held in Cleveland, it was decided that the Association was not in position to make such a guarantee. It appeared that a matter of life and death of the keepers was involved, as they were not provided with fuel and rations sufficient to permit them to remain on the island for the winter in case their removal at the close of navigation was rendered impossible by weather conditions. The Association then urged upon the Light-House Board that in the future it would modify its arrangements at this station and others similarly situated, so that rations and fuel might be provided for the keepers, the lights kept open until the close of navigation and the keepers then removed, if possible; otherwise, if the removal of the keepers proved impossible, they could remain on their stations during the winter. We are happy to state that the Board considers this proposal a reasonable one and has assured the Association that it will take up the question of keeping Passage Island Light in operation until navigation is closed on account of ice, and make before the close of another season suitable arrangements whereby this can be accomplished.

BUFFALO HARBOR.

In the fall of 1900 the members of the Lake Carriers' Association residing in Buffalo, were urged by a meeting of the executive committee held in Cleveland, to take up with the municipal authorities the improvement of the inner harbor at Buffalo. It was represented that vessels of the Association were subjected to considerable delays at Buffalo on account of low water. With the aid of the Harbor Committee of the Buffalo Merchants' Exchange, an agitation for the improvement of harbor conditions at

Buffalo was begun, which has resulted in an appropriation being made by the Common Council of $100,000 for the removal of hard-pan in the inner Buffalo harbor, abreast of the Watson elevator. This will remove the chief cause of delay. Provision was also made for a new bridge, without center abutments, across the Blackwell Canal at South Michigan street. This will remove another cause of detention of vessels at Buffalo, conditions at this bridge having been such during the past few years, that heavily loaded vessels of the larger type could not pass through the draw without unloading some of their cargo. The action of the executive committee of the Association in this matter and the result which followed, are a good instance of the many ways in which vigilant action on the part of the Association can benefit the carrying interests.

RIVER AND HARBOR BILL.

Through unfortunate legislative complication the River and Harbor Bill failed in the last hours of the last Congress. The bill provided for an unusual number of important projects on the Great Lakes, and its unfortunate failure has delayed the work. A new bill is in course of preparation, however, and is in the hands of practically the same committee which framed the last bill, and we can reasonably expect that the interests of lake navigation will be well provided for. It is expected that the new bill will contain a section providing for the appointment of an international commission on the subject of maintenance of lake levels. If this is done it will be largely due to the efforts of the Lake Carriers' Association having this matter in charge. Mr. Firth has seen for many years that the important subject of maintaining the lake levels could only properly be dealt with by means of an international commission. The new methods of developing and utilizing water power, particularly in connection with electric smelting and electrical transmission of water power to considerable distances, has made it certain that at every point where there is a considerable fall of water in the connecting water-ways of the Great Lakes, water power will be developed to the fullest extent. This will divert the water from existing channels, and unless the government authorities and the vessel interests on the lakes are alert to protect their interests, they will find that the interests of navigation are injuriously affected. Injury of this kind is particularly likely to occur, because a lowering of the levels of the lakes must necessarily be gradual and a matter of inches. Moreover, owing to variations in the natural levels of the lakes from year to year, due to annual rain falls, above or below the average, and hourly changes in the levels due to barometric and weather conditions, it is extremely difficult to tell when and how the levels of the lakes are being lowered. Vessel owners will find that they have less water for their ships, but when the navigation interests or the United States government goes into court to prove that the lowering of the levels of the lakes is due to the power developments, they will find so many other conditions affecting the lake levels, that it will be extremely difficult to make the proofs. If the injury is to be prevented, therefore, it is very desirable that action should be taken promptly. After millions have been spent in developing power plants, it is not an easy thing to induce the government, even if it has the necessary authority, to prevent the use of water power from injuriously affecting navigation. During the last session of Congress an agreement was arrived at in conference at Washington between the owners and managers of the power company at Sault Ste. Marie and a committee of the Lake Carriers' Association, and a bill was drawn which would protect the interests of navigation and which was pronounced by the power company to be satisfactory to it. No steps have been taken, however, on the part of the power company to have the bill agreed upon at Washington enacted into law. Meantime the work of the power company at the Sault is proceeding rapidly. The company has begun the construction of remedial works at the head of the rapids which they claim will obstruct the flow of water over the rapids to such an extent as to compensate for the draft of water through the power canal. These remedial works, however, are located on the Canadian side of the International boundary line, and beyond the jurisdiction of the United States government. The importance of this matter and the critical condition which the work has now reached, render it very desirable that the power company should inform the vessel interests of their purpose with respect to the bill agreed upon at the Washington conference last year, and if the power company has decided to drop this bill or even to oppose its enactment by Congress, the matter should again be taken up by the Lake Carriers' Association and a decision as to the best course to follow should be arrived at without delay.

MISCELLANEOUS MATTERS DURING THE PAST YEAR.

Last year's report contained reference to a plan under consideration by the Lake Carriers' Association for a federation of the employes on lake vessels whereby owners and men should join in supporting a fund to provide benefits to be paid employes in case of accident. Various meetings were held, at which the details of the proposed benefit fund were carefully considered, and a detailed plan was pretty thoroughly worked up. The labor conditions which prevailed at the opening of navigation last spring, however, were such as to render it inexpedient to put this plan into effect at that time. The matter has therefore been held in abeyance, but the considerable work already done will be available in the future if the time shall come when the members of the Association desire to revive this plan.

It is not necessary in this report to enter into a detailed discussion of the delays involved in getting vessels of the Association into commission last spring on account of labor troubles. At a meeting of the executive committee held in Cleveland last spring it was voted unanimously that the Association as an association should not take part in fixing salaries of engineers on lake vessels during 1901. The matter was left to each indivilual owner to settle with his own engineers, and the head of the engineers' organization was officially informed to that effect.

A matter which has been considerably discussed during the past year and which may come before the annual meeting for further consideration, is the proposed regulation of navigation in the lower Detroit river, under rules prescribed and enforced by the government on lines similar to those now prevailing in the St. Mary's river. The subject is one which should have most careful consideration.

Appropriate action will be taken by the Association at its annual meeting expressing the sorrow and regret of the members of the Association at the death since the last meeting, of two of its prominent members—David Carter and William E. Fitzgerald. It would be hard to name two members of the Association whose loss would be more deeply deplored. David Carter was a veteran in the lake service, known and respected by all vessel owners, who lived a life full of honors and usefulness. William E. Fitzgerald died under most distressing circumstances, in the very prime of life and at a time when he was becoming a more and more important figure in connection with lake navigation. He always attended the annual meetings of the Association and took a very active interest in its affairs, and his absence at this meeting will be a grief to all our members.

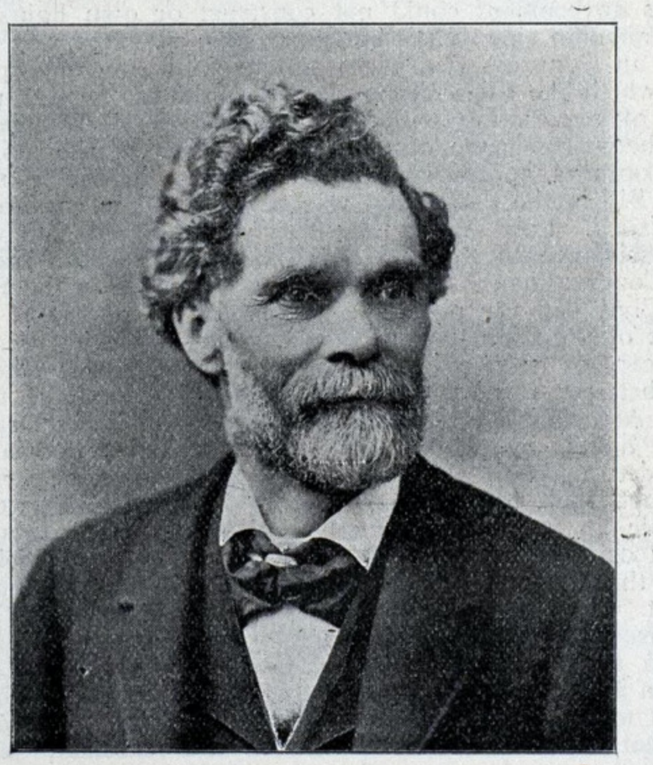
Respectfully submitted on behalf of the Board of Managers by

A. B. WOLVIN, President.

CHARLES H. KEEP, Secretary.

PROCEEDINGS OF THE ANNUAL MEETING OF THE LAKE CARRIERS' ASSOCIATION.

For the second time in the history of the Lake Carriers' Association William Livingstone, of Detroit, is its president. Several days ago, unbeknown to Mr. Livingstone, the members of the Association arrived at the conclusion that he was the right man for chief executive of the Association again. At that time it appeared that the laws of the body would not allow of any one having more than one term and several years ago Mr. Livingstone had been the president.



WM LIVINGSTONE.

Detroit Vessel Owner Elected President of the Lake Carriers for the Second Time.

On Tuesday, shortly before the meeting was called to order, a clause in the laws was discovered which allowed of the re-election of former presidents. There were three hundred members in the convntion hall whn Capt. John G. Keith, vice president, called the meeting to order. President Wolvin was not present.

Secretary Chas. H. Keep read his report and ten minutes after he had taken his seat the Association proceeded to elect its officers and appoint committees to look into the questions to come up before the Association for argument.

Henry Coulby, of Cleveland, manager of the Pickands-Mather fleet, proposed the name of Mr. Livingstone. His election was carried unanimously, and he was almost carried to the presidential seat by Henry Coulby and Capt. C. W. Elphicke.

He is the first ex-president of the Association who has ever been honored with a second term.

"Gentlemen," said Mr. Livingstone, when he caught his breath, "I appreciate the high compliment which you have bestowed upon me. This is my second term, and I am still surrounded by friends whom I knew in boyhood. As I grow older, I realize the responsibility of this office, and I believe no man ought to accept this or any other office without feeling that with honor there comes responsibility.

"I wish you had chosen someone else for the position, but as you have seen fit to give me the presidency again I can only say that it shall be my best effort to faithfully carry out the terms of the trust you have bestowed upon me."

Mr. John T. Shaw, the admiralty lawyer, next nominated Harvey L. Brown, of Buffalo, for the secretaryship to succeed Mr. Keep, who resigned because of pressing business, after a twelve years' incumbency of the office. Mr. Brown was promptly elected and Harvey D. Goulder, of Cleveland, counsel for the Lake Carriers, then presented, on behalf of the carriers, Chas. H. Keep, the retiring secretary, with a magnificent gold watch and chain. Mr. Keep made a little speech, saying that the Lake Carriers had grown powerful, and that their object should be to avoid all alliances.

The offices of secretary and treasurer were not combined, as it had been rumored might be done.

C. H. Keep, the retiring secretary, who withdrew from the office after twelve years of efficient service, was, in behalf of the Association, presented by Counsel Harvey D. Goulder with a magnificent gold watch, which is rumored to have cost very nearly $1,000.

Capt. Geo. P. McKay was re-elected treasurer unanimously. A committee to nominate vice presidents, new managers and standing committees, was then appointed, and consists of: Henry Coulby, Cleveland; T. T. Morford, Buffalo; C. W. Elphicke, Chicago; David Vance, Milwaukee; D. T. Helm, Duluth; Howard Shaw, Bay City, and J. W. Westcott, Detroit.

The question of dues was one of the first matters taken up. Mr. J. C. Gilchrist, who is the largest owner on the lakes, with the exception of the steel corporation asked for a reduction in the tonnage dues on small wooden vessels. He said that the steel ships and the large wooden carriers could afford to pay the dues of last season, but that the high rates were a hardship on the small freighters. After considerable discussion it was decided to make no change in the rate for large carriers, which was 4 cents a net ton last year, but a reduction of 1 cent a ton was made on the rate of all wooden vessels of less than 1,800 tons, making the rate 2 cents a ton.

Capt. W. W. Smith, of the committee on aids to navigation, asked that an effort be made to have the government arrange to have the following light-houses lighted by Pintsch gas after the light-house keepers have been taken away on the following islands: Stannard Rock, Manitou Island, Passage Island, Outer Island, Devil's Island and Sand Island, on Lake Superior. Resolutions on the death of David Carter, of Detroit, Capt. J. S. Dunham, of Chicago, and W. E. Fitzgerald, of Milwaukee, who died during the past year, were adopted.

The committee appointed to recommend rules for navigating the lower Detroit river held a conference with Capt. A. B. Davis, of the United States revenue cutter service, who has had charge of the "Soo" river during the past few years, and recommended certain rules be adopted. The report, which was referred to the legislative committee, with power to act, recommends that vessels going in the same direction will not be allowed to pass each other between the upper end of Ballard's Reef and the lower end of Bois Blanc Island, and shall remain 500 feet apart between the points named. Vessels bound in opposite directions will check when passing.

The salaries of the secretary and counsel were not changed, but an advance of $300 was made in Treasurer McKay's salary, making it $1,800. Some of the members of the committee to which the matter was referred were in favor of making it $2,000.

One of the most interesting speeches made at the session was that of C. E. Kremer, Esq., of Chicago, on the need of a "snug harbor" for old and indigent sailors on the lakes. Mr. Kremer said that the lake vesselmen ought to establish a "snug harbor" like they have in New York and urged the Lake Carriers to keep the movement, which has been started in Chicago, going. Mr. Kremer said he knew of an old master who at present is in a Canadian poorhouse. The man referred to is well known in Cleveland and a good-sized purse was collected for him.

Mr. Frank J. Firth, an ex-president of the Association, said it was the duty of vesselmen to take care of old sailors, and a resolution offered by him requesting the committee on permanent organization to take the matter up at once and make recommendations, was adopted. Before adjourning it was decided to hold the next annual meeting the third Wednesday in January.

Three special committees were appointed to draw up suitable resolutions in memory of the three members who have passed away since the last annual meeting—James S Dunham, David Carter, of Detroit, and William E. Fitzgerald, of Milwaukee.

One of the most important questions under consideration was in reference to the improvement of navigation at a number of points where it is now attended with some risk, or with the possibility of expensive and irksome delay consequent upon a channel becoming blockaded through accident.

Counsel Harvey D. Goulder gave a concise explanation of existing conditions and the results which the Association wished to bring about, pointing out the necessity for a double track channel in the passage between Lake Huron and Lake Superior. A new channel in the West Neebish, would, he said, be better, because supplying a

straighter and shorter route. He also urged the need of a new channel on the west side of the present channel through the St. Clair Flats, and suggested the widening of the present channel at the Lime Kilns.

Mr. Goulder said he had been encouraged to believe that all these improvements could be gotten into the Rivers and Harbors Bill, if the Lake Carriers would send a delegation to Washington.

A special committee and an auxiliary committee to take the matter up were appointed, comprising:

F. J. Firth, Philadelphia; A. B. Wolvin, Duluth; H. Coulby, Cleveland, James Corrigan, Cleveland; W. C. Farrington, Buffalo; C. W. Elphicke, Chicago; David Vance, Milwaukee; Howard L. Shaw, Bay City; Dennis Sullivan, Chicago.

Auxiliary to special committee—W. C. McMillan, Detroit; David Vance, Milwaukee; M. M. Drake, Buffalo; A. A. Parker, Detroit; C. W. Elphicke, Chicago; W. W. Smith, Edward Vance.

The auxiliary committee is authorized to investigate the needs of navigation along the Detroit river and adjacent waters, and report to the special committee. In addition to the work mentioned, the committee will endeavor to have the government assume the expense of maintaining certain lights in Lake Erie, which now cost the Lake Carriers $1,200 per year, and also draw up suitable regulations to govern the navigation of the lower portion of the Detroit river, regulations which, as Counsel Goulder observed, will prevent over-ambitious captains from getting their boats into trouble, but which will not interfere with the rights of anyone navigating that section of the river.

Alex. R. Sinclair, of Duluth, in a communication to the Lake Carriers, recommended the establishment of reciprocal wrecking privileges between the Canadian and United States governments. The grain handling question at Buffalo was disposed of by the adoption of a resolution, highly commendatory of Thomas W. Kennedy, the present efficient superintendent.

The matter was officially referred to the committee on grain shoveling.

A resolution by M. M. Drake requested that the attention of the proper government department be called to the conditions of the outlet of Lake Erie, accompanied by a request that some consideration be given the question of whether the deepening of the cut through the natural barrier does not have a tendency to lower the level of the lake, and also whether the increasing necessities of the commerce to Black Rock, Tonawanda, and below, may not be best served by enlarging the present Black Rock ship canal. Copies of the resolution, which was referred to the legislative committee, will be sent the members of Congress from lake districts.

Buffalo harbor and that vicinity received more attention than any other one locality. On account of the shallow spots in the river at Buffalo and the delay attendant on entering that port, the following resolution was presented by Capt. M. M. Drake:

"Whereas, during the past two seasons the channels of Buffalo harbor have been in such condition that ships loading at up-lake ports could not deliver their cargoes at the elevators and ore docks in Buffalo without delay and great expense owing to the want of sufficient depth of water; that the Lake Carriers here assembled urge the authorities of the port of Buffalo to take immediate action in having the necessary improvements made, placing that port on an equal footing with other Lake Erie ports; and be it resolved that the secretary cause a copy of these resolutions to be forwarded immediately to the mayor of Buffalo."

Col. G. J. Lydecker, Corps of Engineers, U. S. N., recently transferred to Cincinnati, was remembered by resolutions of regret. A resolution was adopted petitioning the Secretary of the Treasury of the United States to provide and maintain under the supervision of the lighthouse establishment a vessel adequately equipped with the proper appliances for supplying with compressed gas the gas buoys now established, and such others as may hereafter be established.

The new series of colored charts issued by the United States Lake Survey were commended with the recommendation that the same be extended to cover all portions of the lakes and connecting waters.

The executive committee was authorized to attach a moderate compensation to the position of chairman of the committe on aids to navigation.

The report of this committee submitted and adopted at the afternoon session, was as follows:

Vice presidents—J. C. Gilchrist, Cleveland· T. T. Morford, Buffalo; W. C. McMillan, Detroit; C. A. Eddy, Bay City; Dennis Sullivan, Chicago; W. H. Myers, Milwaukee; A. B. Wolvin, Duluth; W. S. Brainard, Toledo; F. J. Firth, Philadelphia; M. J. Cummings, Oswego; M. A. Bradley, Cleveland; W. A. Rogers, Buffalo.

Executive committee—William Livingstone, Detroit; T. T. Morford, M. M. Drake, G. L. Douglass, W. A. Rogers, Edward Smith, W. C. Farrington, Buffalo; Jas. Corrigan, J. H. Sheadle, W. H. Brown, Silas Hitchcock, M. A. Bradley, W. C. Rhodes, William Gerlach, J. C. Gilchrist, John Mitchell, William Becker, H. Coulby, J. E. Upson, H. A. Hawgood, W. C. Richardson, Cleveland; A. W. Colton, Toledo; L. C. Waldo, M. E. Farr, Detroit; David Vance, W. H. Myers, Milwaukee; F. W. Smith, C. A. Eddy, Bay City; Dennis Sullivan, C. W. Elphicke, John G. Keith, Chicago; D. T. Helm, A. B. Wolvin, E. J. Chamberlain, Duluth.

Board of managers—T. T. Morford, E. T. Evans, G. L. Douglas, J. J. H. Brown, John Kelderhouse, W. H. Gratwick, Jr., M. M. Drake, Edward Smith, W. C. Farrington, C. H. Donaldson, G. W. Maytham, L. H. Van Allen, M. A. Bradley, James Corrigan, D. R. Hanna, H. G. Dalton, George P. McKay, Harvey H. Brown, John Corrigan, William Gerlach, Henry A. Hawgood, W. G. Richardson, J. C. Gilchrist, W. D. Rees, John Mitchell, R. R. Rhodes, J. E. Upson, Charles L. Hutchinson, W. H. Becker, W. A. Hawgood, W. H. Mack, H. Coulby, J. H. Sheadle, W. G. Mather, E. S. Mills, T. F. Newman, W. W. Brown, James W. Millen, William Livingstone, W. C. McMillan, W. A. Livingstone, A. A. Parker, L. C. Waldo, Alex. McVittie, J. W. Westcott, Thomas Adams, Edward Hines, R. J. Dunham, John G. Keith, Joseph Austrian, C. W. Elphicke, Dennis Sullivan, Henry McMorran, J. J. Random, J. H. Colbrick, George J. Harris. W. S. Brainard, A. W. Colton, L. S. Sullivan, C. A. Eddy, O. W. Blodgett, B. Boutell, Thomas Cranage, Howard L. Shaw, J. W. McGraw, A. B. Wolvin, D. T. Helm, David Vance, H. J. Pauly, W. H. Myers, Albert Gibbs, F. W. Smith, F. L. Vance, James McBrier, F. J. Firth, F. W. Gilchrist, C. T. Morley, Edward Mehl, R. E. Schuck.

Committee on permanent organization—President, Wm. Livingstone; counsel, Harvey D. Goulder; secretary, Harvey L. Brown.

Committee on aids to navigation—George P. McKay, Cleveland; L. J. Weeks, W. W. Smith, W. A. Hawgood, Cleveland; J. J. H. Brown, Buffalo; M. M. Drake, Buffalo; Edward Morton, J. G. Keith, Chicago; J. W. Westcott, Detroit; Howard L. Shaw, Bay City; William Gerlach, Cleveland; A. W. Colton, Toledo; A. Gibbs, A. E. Stewart, Detroit.

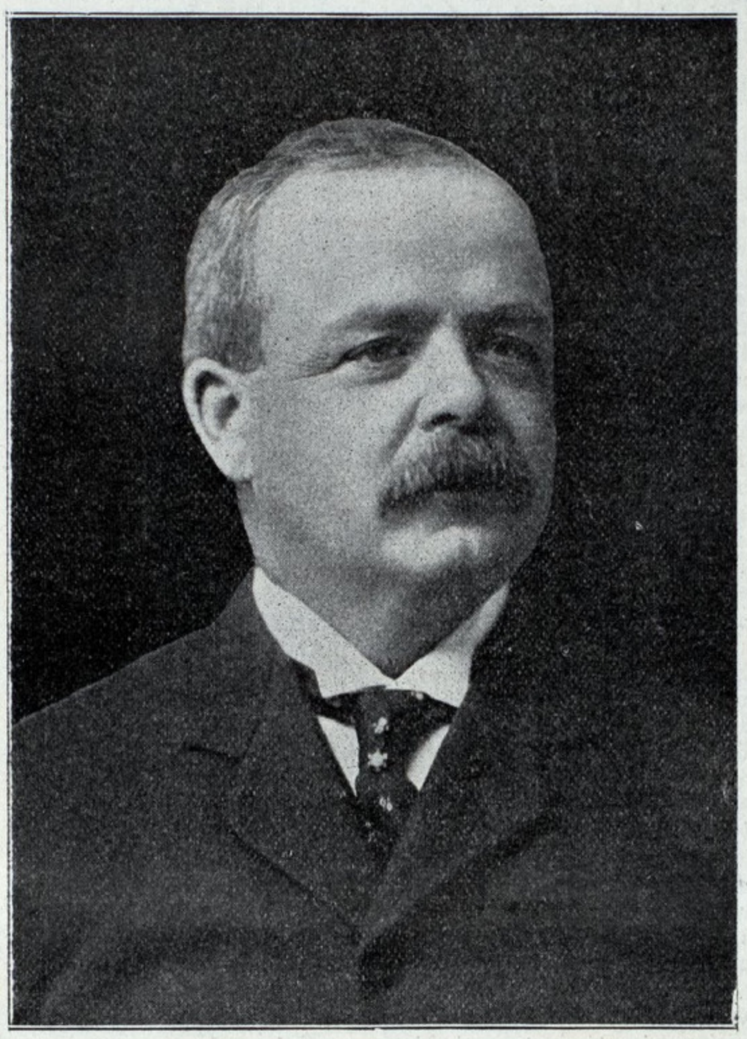
Committee on legislation—William Livingstone, G. L. Douglass, E. T. Evans, P. P. Miller, M. M. Drake, T. T. Morford, L. H. Van Allen, Frank J. Firth, W. C. Farrington, G. W. Maytham, C. H. Donaldson, J. J. McWilliams, Edward Smith, L. C. Hanna, James Corrigan, John Mitchell, B. W. Parker, William A. Livingstone, C. A. Eddy, J. G. Keith, D. Sullivan, F. L. Vance.

Committee on grain shoveling—Edward Smith, W. C. Farrington, M. M. Drake, T. T. Morford, E. T. Evans, A. W. Colton, L. C. Waldo, J. C. Gilchrist, D. Sullivan, A. B. Wolvin, W. W. Brown.

The annual report of the board of managers shows that tonnage enrolled in the Association during the past year was 847,203, an increase of 32,000 tons over the preceding year. The fleets of the United States Steel Corporation and J. C. Gilchrist now make up about 44 per cent. of the tonnage. Treasurer McKay's report shows that dues aggregating $32,668.50 were collected and $12,816.14 profit received from grain shoveling at Buffalo. Shipping Master A. R. Rumsey reported that 16,766 men had been shipped through the eight offices at lake ports.

The meeting adjourned on Thursday, to reconvene the third Wednesday in January, 1903.

A total of fifty-four vessels, with a tonnage of 21,623, and an estimated valuation of $745,500 passed out of service this season in the lake trade. Several 2,000 and 3,000 ton boats are included in the list but the greater proportion is made up of small and indifferent class and tonnage.



CAPT. A. B. WOLVIN,
Ex-President Lake Carriers' Association.

ASSOCIATION OF LUMBER CARRIERS.

Seventy-five men, representing all the vessels engaged in the lumber carrying trade on the Great Lakes, were in session in Detroit this week, trying to organize their interests into a combination or trust, which should control the traffic. It was given out after committees had worked continuously for six hours, that it seemed unlikely that a trust could be formed at the present time, owing to the inability of vessel owners to come to an agreement. Instead of one corporation it looks as if the Lumber Carriers' Association would take up the fixing of minimum rates at which lumber is to be carried the coming season. These rates will be named if the trust plan ultimately falls through.

The officers elected by the Association were: President, F. W. Gilchrist, Alpena; secretary and treasurer, H. E. Runnels, Port Huron. E. W. Cottrell, of Cleveland, was elected counsel. This organization will be continued in case no trust is formed.

A long conference was held with President Keefe and Secretary Barter, of the Longshoremen's Union, over charges for handling cargoes the coming season. The relations with the union were said to be harmonious and there was not much fear of labor trouble on the lumber docks on the question of wages.

Either a trust will be formed or a scale of prices adopted for carrying lumber, which shall be binding upon the interests represented in the meeting. The probable price for carrying lumber from the head of Lake Superior will probably be fixed at $2.50 per thousand.

LINSEED OIL PAINT VS. ELASTIC PAINTS FOR HEATED SURFACE.

A stranger walking along the docks of the various ports of the lakes is always impressed by the neat and cleanly appearance of our steamers, and wonders how they can be in such excellent condition considering the short time between ports.

The only marring effect on a beautiful ensemble is the shabby appearance of their smoke stacks, which are almost always at variance with the rest of the boat, notwithstanding the constant efforts of the engineer's department to keep them looking well.

The engineer of one of our large steamers was recently asked why every time his boat reached port he found it necessary to have his men at work painting the smokestacks, ventilators, etc. He replied: "It is on account of the paint with which we are supplied. Only one kind is put on board and that is expected to do all the work from painting the hull to painting the hot steam pipes."

However good a paint may be it will not meet the requirements of both the engineers' and deck departments. A paint that may be all right on the outside of the vessel, will invariably cause dissatisfaction when applied to heated surfaces. Painting them often only makes a bad matter worse, as a succession of coats, in time, will cause the paint to blister and crack, and by permitting the water to enter will work injury to the iron beneath.

There are paints made especially for this purpose, among the best being the Wheeler Elastic Black, manufactured by the Day's Varnish Co., of Cleveland, O.

This paint will always be found satisfactory, both as to its non-cracking and blistering qualities, but in regard to the durability of its good appearance even after the wear of a whole season.

When I have been supplied with this paint I have found that a coat in the spring and another in the fall is all that is required to preserve the durability and appearance of the article coated.

It may cost a little more in the first instance, but it soon pays for that as less coats are necessary, the iron work is better protected, and the men may be employed at work around the engine which may add to its efficiency instead of being eternally painting smokestacks, etc.

Time and labor would be saved by using the proper paint in the first place.

Linseed oil and lamp black are all right (if the oil is good) for the outside of a vessel, but it takes a very different composition for heated surfaces.

THE NEW YORK MAIL BOAT.

It is not generally known that the United States government has in New York harbor a post-office boat, similar in function to the railroad postal car. This boat, the "Postmaster General," meets the incoming ocean liners in the lower bay at Quarantine, and takes from them the mail for this country, loading it in pouches on to the decks of the "Postmaster General." As soon as the mail is loaded, the postal boat hurries to its dock in New York City, where it is met by a large number of government mail wagons, which receive the bags of mail and distribute them to the general post-office, the sub-stations and the railroads direct. By these methods the most rapid movement of the mail is had, each sub-station and the railroads getting their portions without delay and without the mail having to go through the regular post-office. In this way the movement of the mail is so facilitated that nearly always the mail brought up the Bay by the postal boat is in the sub-stations, and frequently on the railroad trains, hurrying out of New York City, before the ocean liner reaches its New York dock. This scheme was originated by Postmaster Van Cott, of the New York City post-office, and is decidedly successful.

THE HISTORY OF LLOYD'S REGISTER.

Not infrequently does it happen, even in these days of general knowledge, that Lloyd's Register, London, is confused with the well known organization of underwriters bearing the surname of the Edward Lloyd who, in 1668, if not a little earlier, began operations at a coffee-house in Tower street—an establishment which was removed in 1692 to Lombard street. But everyone connected with the shipping world is familiar with the fact that in Lloyd's Register is concentrated what may be regarded as the nearest approach to a perfect merchant shipping council possessed by Great Britain or any other country. These two influential bodies are, in fact, quite different in their constitution, their functions, and their spheres of influence. The world famout Lloyd's is primarily an association of persons who in their individual capacity carry on the business of marine insurance. Its corporate aims are mainly to protect the interests of its members and to collect and disseminate, as it has long done through the medium of the Shipping Gazette, all important items of maritime intelligence. Thus Lloyd's affords on a grand scale one of many instances in which the common needs of men engaged in the same class of business have demanded a corporate union for their effectual protection and mutual advantage.

Lloyd's Register, on the other hand was designed primarily to bring into harmony the varied and apparently conflicting interests of the merchant, the shipowner and the underwriter. The origin and growth of this remarkable institution, up to 1884, has been narrated in the "Annals of Lloyd's Register," published in that year; but as that excellent book is not generally accessible it may be interesting to state that the term "Lloyd's" dates back to the middle of the 17th century. at which period several coffee-houses in the city of London were used as regular meeting places by business men. It is on record that the first of these coffee-houses was actually established within a stone throw of the very building in which Lloyd's Register began operations, and a copy of a bill is still preserved setting forth "The Virtue of the Coffee Drink first publiquely made and sold in England by Pasqua Rosee, in St. Michael's Alley, Cornhill, at the sign of his own head." Further west, there were at the same time coffee-houses where wit rather than commerce was the great element of attraction. Prominent among these places were the coffee-houses in Great Russell street, Covent Garden, known respectively as "Will's," "Tom's" and "Button's." "Will's" was the favorite haunt of Dryden, Dr. Johnson, Sir Joshua Reynolds, and David Garrick were among the celebrities in the company which regularly assembled at "Tom's"; and at "Button's" Addison, Pope, Steele, Swift, Arbuthnot and other well known writers of the day gathered. These and many similar establishments existed in what is now the West Central district of London, and it has been stated, as illustrating their variety, that "there were coffee-houses where medical men might be consulted; Puritan coffee-houses for money changers; and Popish coffee-houses, where, as good Protestants believed, Jesuits planned, over their cups, another Great Fire, and cast silver bullets to shoot the King (William III)." The coffee-houses in the city were, however, purely centers of commercial life, the one already alluded to as founded by Mr. Edward Lloyd being frequented almost exclusively by gentlemen engaged in shipping and underwriting. In 1770 the principal underwriters and brokers, who had long made the coffee-house their regular meeting place, decided to form themselves into an association. After occupying quarters, first in Lombard street and subsequently in Pope's Head Alley, they settled in the Royal Exchange, where they have since remained, year by year growing in their own strength and in public usefulness.

The business which Lloyd's was formed to conduct rapidly expanded under the influence of a definite organization, and an extended field of operations necessitated the introduction of an authoritative record containing particulars of ships such as would be useful both to the merchant anxious to secure safe conveyance for his goods, and to the underwriter prepared to insure either hull or cargo.

It is stated in the "Annals" alluded to that "the early history of the classification of ships is veiled in much obscurity. The first recorded attempt to establish anything like an organized registry dates back no farther than last century, although it admits of little doubt that the classification of merchant shipping in a more or less imperfect form existed long before—if, indeed, it was not contemporaneous with the business of marine insurance." Lloyd's Register was founded in 1834 to satisfy the need which was then felt by all sections of the shipping community for a satisfactory and well ordered system of classification for merchant vessels of all types and of all nationalities. Two such registers had previously existed in Great Britain—one established in 1760, and managed by underwriters, and the other established in 1799, and managed by shipowners; but, while shipowners were dissatisfied with the first, underwriters distrusted the second. It had long been recognized, however, that an institution that should combine the diverse interests of the two main sections of shipping business was absolutely essential for the benefit of each; and by the voluntary action of that community itself Lloyd's Register, on its present basis, was called into being by the fusion of the existing bodies. General confidence in the organization was secured at the outset by a provision in its constitution that the administration of the society should be permanently vested in a committee composed in equal proportions of merchants, shipowners and underwriters.

The committee of Lloyd's Register now consists of 59 members:

These gentlemen are elected as vacancies occur by (1) Chambers of Commerce; (2) Shipowners' Societies; and (3) Underwriters' Associations respectively in the several shipping centers of the United Kingdom. In technical matters affecting the society's rules for the construction of ships and machinery, the committee has the advantage of the co-operation of a body of experts representing shipbuilders and engineers specially selected by the principal institutions of Great Britain associated with naval architecture and engineering. This assistance, at all times most willingly rendered, has been of the greatest possible advantage to Lloyd's Register in laying down codes of regulations which have admittedly been productive of great good to the shipowner and all concerned in shipping business, and have at the same time tended materially to the safety of life and property at sea. It is certain that but for such an alliance the harmony which now prevails regarding the most approved principles of ship construction could never have been secured; but the knowledge that all competing firms are bound to work up to the level of the rules which may from time to time be promulgated ensures for the committee the best advice that can be gained by investigation and experience. Consequently, it would be difficult to conceive a council which would be more thoroughly representative of the shipping community than is the Committee of Lloyd's Register.

Now, as in the early days, the first object of the society is the classification of sail and steam tonnage. Rules are published annually, embodying the best current practice in the construction of ships, marine engines, and boilers. The great majority of vessels built in this country, as also many erected in foreign yards, are constructed with a view to obtaining a class from Lloyd's Register, and it is clear that the rules issued by the committee must always exercise a potent influence in maintaining the highest level in the practice of shipbuilding yards at home and abroad. The modus operandi is extremely simple. When it is proposed to build a new vessel the designs are in the first instance forwarded to Lloyd's Register, where they are carefully examined by the members of the professional staff, whose first duty it is to see whether the rules of the society are complied with in the plans submitted. If departures from the rules are desired, the proposals have to be considered and suitable compensation arranged, where needful, to ensure that the standard of strength and efficiency provided for in the rules shall be fully maintained. The building of the vessel then begins under the supervision of the society's local surveyors, and when she is completed the surveyors forward detailed reports, showing that the vessel has been constructed in accordance with the plans as submitted and finally approved, and is as regards workmanship, equipment, etc., eligible to be classed as contemplated. When these reports are found to be in order, the character is assigned by the committee.

Iron and steel vessels are, in pursuance of this practice, classed for an indeffinite period under a system of frequent surveys, the varying degrees of strength being indicated by the characters 100 A1, 90 A1, 80 A1. Wooden and composite vessels are classed A1, A1 in Red, and Æ for definite terms of years. The society has found it necessary continually to vary its rules, so that they may always be up to date in the evolution witnessed in the shipbuilding industry. It is a matter of universal knowledge that the principal material used in construction has changed successively from wood to iron, and from iron to steel; that sailing vessels have in a large degree been supplanted by steamers; and that improved and more economical types of machinery and boilers have been introduced. With all these important developments Lloyd's Register has ever been in full sympathy. It would be idle to ignore the fact that its rules have occasionally been adversely criticised here and there by owners who have contented themselves with the classification given elsewhere, but the fact remains indisputable that the certificate of Lloyd's Register is the one universal passport in the international shipping community.

WINTER FLEET AT CLEVELAND.

Cleveland's winter fleet this year is not as large as it has been in previous seasons. Last year the total number was 121, while this season there are but 113 boats in port. This is accounted for by the fact that many vessels which would have come here have been held in Buffalo with grain cargoes. The fleet consists of the following boats:

Marina, Castalia, Victory, J. J. Albright, Mariposa, O. M. Poe, R. L. Fryer, John Mitchell, Yale, George T. Hope, Falcon, Pontiac, Centurion, Pioneer, Lagonda, Andaste, Caledonia, Andrew Carnegie, Mineral State, America, Louisiana, Queen of the West, Desmond, Yuma, Cadillac, H. C. Frick, Maida, Grace Holland, Republic, W. E. Reis, Continental, Magna, D. Z. Norton, Fayette Brown, 134, 110, G. E. Hartnell, Roman, Mary B. Mitchell, J. H. Devereaux, William Edwards, Selkirk, I. J. Boyce, Golden Age, John W. Moore, Fanny Neil, Helvetia, H. W. Sage, A. S. Chisholm, J. M. Hutchinson, M. W. Page, Business, J. S. Fay, Magnetic, Iron Chief, Quito, V. Swain, F. A. Georger, M. S. Bacon, George Roby, John Fritz, 117, John Ericsson, J. J. McWilliams, J. B. Trevor, George King, George Williams, City of Naples, W. S. Mack, Neshoto, 202, 201, Mariposa, Angus Smith, Verona, Cannon, Mary A. McGregor, H. D. Coffinberry, Plymouth, Scotia, Alex. Anderson, Arizona, E. S. Pease, Planet, Twin Sisters, Kaliyuga, Crosthwaite, Chattanooga, George Dunbar, Rhoda Emily, Hattie A. G. Lindsay, Chickamauga, C. B. Jones, D. P. Dobbins, Argo, Shawnee, Donaldson, Shrigley, Fred Kelley, 118, S. E. Sheldon, V. H. Ketchum, J. S. Russell, 133, R. P. Ranney, Sandusky, 127, 107, William Jones, Kingfisher, Malta.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF ENGINEER, NINTH LIGHT-HOUSE DISTRICT,
FEDERAL BUILDING, MILWAUKEE, WIS., Jan. 18, 1902.

POSITIONS IN THE LIGHT-HOUSE SERVICE.

Notice is hereby given that an examination will be held at this office for the purpose of perfecting an eligible list for the positions of Master, Mate, Second Mate, Engineer and Assistant Engineer on the Light-House Tender in this district, which includes Lake Michigan, Green Bay and tributary waters lying west of a line drawn across the Straits of Mackinac at Mackinac Point, Michigan. Also for the positions of Superintendent in the Light-House Service in this district.

One position of superintendent will require a machinist who understands the construction and repair of boilers and machinery.

The other positions of superintendent will require a general knowledge of building construction, qualities of material, and ability to handle working force.

Persons who wish to apply for the foregoing positions should obtain the proper blank forms of application from this office, either in person or by mail, and after filling them out return them to this office.

Applicants need not appear in person.

Thirty days from the date of this notice, all applications received will be examined, the applications graded according to merits, and a list of those eligible for appointment sent to the L. H. Board. J. G. WARREN,
Major, Corps of Engineers, U. S. A., Engineer, Ninth Light House District.

DETROIT SHIPMASTERS' BALL.

Successful beyond expectation was the ninth annual ball of Detroit Lodge, No. 7, of the Shipmasters' Association, given at the Masonic Temple on Tuesday night. Long before 11 o'clock the 1,500 dance programs had been distributed and many were still unsupplied. It was estimated that in the neighborhood of 800 couples occupied the ball room and the galleries.

Naturally the presence of so many people to some extent impeded the dancing, but there was still room to get around. The dance numbers succeeded each other with but slight intermission, music being furnished alternately by Finney's and Zickel's orchestras.

The decorations were on a more elaborate scale than hitherto attempted at these events. Every portion of the wall space was decked with flags of various nationalities, the stars and stripes predominating and the thistle and harp occupying positions of honor, side by side. From the ceiling other flags and ensigns were draped imparting a very pleasing color effect to the room. Conspicuous among the decorations were the letters, "S. M. A." formed by red, white and blue incandescents.

The grand march was started a few minutes after 9 o'clock with Capt. Murray McIntosh and Miss Jeanette Sullivan leading. The graceful manner in which the captain and his fair partner did their part inspired admiration all down the line.

A reception committee numbering about 100 members of the Association, with Capt. Alex. McKay as chairman, welcomed the guests and was very successful in helping in the good time. Capt. George A. Symes, of the floor committee, and his staff, were given little time for rest. Most popular of all perhaps, was the refreshment committee of which Capt. David Wilson was chairman.

The various committees in charge of the ball were as follows:

Floor—Captain George A. Symes, chairman; Captain H. H. Parsons, D. R. Parsons, R. England, Wilson McGregor, M. G. McIntosh, James B. Watts, L. M. Stoddard, Walter Ashley, W. A. Irwin, Alex. Clark, A. E. Stewart, J. B. Maddock, E. J. Burke, F. W. Trent, E. L. Rains, H. Still.

Refreshment—Captain David Wilson, chairman; Captains Joseph Waltman, George E. Meritt, Hugh McKenzie, H. Still, Jas. A. Skiffington, Fred C. Hart, Thomas Curran.

Entertainment committee—Captain George A. Symes, chairman; Captains Timese LeMay, L. M. Stoddard, William Crosby, H. Still, Henry Berlin, John McAlpin, B. F. Ogden.

GRAND HARBOR MEETING.

The sixteenth annual "voyage" of the Grand Harbor of the American Association of Masters and Pilots of Steam Vessels of the United States, was commenced in Washington, D. C., Wednesday; Capt. John C. Silva, of Boston, presided as Grand Captain. There were fifty-two delegates in session. The Association will make an effort to induce Congress to enact a law for the appointment of a jury to assist inspectors in investigating the conduct of officers of steam vessels when this is brought in question.

The Grand Haven Tribune of Thursday last says: "Alex Currie, who has been engineer of the Crosby line steamer Naomi ever since she came out in 1881, has been deposed, and his place taken by an engineer named Green, of Muskegon. The latter was engineer of the ill-fated Moran on her last trip from this port several years ago.

TO BRIDGE THE STRAITS OF BELLE ISLE.

The lowering of temperature caused by the body of ice frozen solidly in the Straits of Belle Isle most certainly helps to create the present tempestuous conditions incident to winter in the St. Lawrence region, and there is little doubt that, if the flow of this frigid current, with its load of ice masses, should be diverted in some other direction a very marked betterment in the climatic conditions would ensue. Indeed, it is by no means improbable that the outcome would be that the damming of the strait would so alter the meteorological outlook that the Gulf and River St. Lawrence might be made navigable all winter, certainly as far as Quebec, and, possibly, inland to Montreal.

Practically all the ice which now forms in the upper part of the river is "harbor" ice, which takes shape in the coves, creeks, bayous, and havens on both sides, the lowering of temperature over the whole region consequent upon the inrush from the Arctics causing this congealing of the surface. If the navigation of the St. Lawrence for the whole year could be assured by this experiment it would be money well spent for Canada to take hold of it.

But the objection to the idea at the present moment it that there are no lines along which could be indicated what the likely climatic changes would be. Granted that the effect of such a structure would be to raise by many degrees the temperature of that region, it by no means follows that it would accomplish all that is claimed for it. The Gulf Stream, for instance, makes its way north to our very doors, and the ice floes drift south and meet it there, but though the warmer current conquers, it does not give us the benefit of a perennial spring, for we are annually treated to as convincing evidences of the undiminished power of the ice king as even the most skeptical could or should require.

However, the project is worthy of the most serious consideration of the Canadian statesmen and legislators. It is estimated that the work would cost $30,000,000. This is a formidable sum; but, in view of the demands just now that Canada spend $5,000,000 in improving the St. Lawrence route, the larger sum seems less appalling. Nor is the undertaking so formidable as might appear from a superficial view. It presents no engineering difficulties such as have beset many projects already carried to a successful issue.

It simply means starting a dump and carrying it across the strait, with a convex curve, toward the Atlantic, so as to better resist the chafing and pressure from the floes and bergs. The causeway would have to be built of rock, as earth would be washed out, but Labrador and Northern Newfoundland abound in rock. Hills, mountain ranges and boulders innumerable are to be found in abundance, and it should be simply a case of bowling down the hills and carting the debris to the dam and dumping it in.

The structure should be wide and high—wide to prevent the waves forcing through the interstices, and high to prevent them sweeping over the parapet and washing across the roadway. But this would only be a matter of expense—the more money, the better the dam.

It is proposed to have a railway run across the new highway, but the value of this feature of the scheme is more than doubtful.

LETTERS AT DETROIT MARINE POST OFFICE.

JANUARY 15, 1902.

To get any of these letters, addresses or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of his list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Ainsworth D, Bartlett
Adamson C A, G S India
Berendts Oscar, H Bissell
Bieths Jno, Northern King
Case Harley, La
Call C I
Darling H T
Dooley Jas, Zenith City
Fager Jaune, Ashland
Graff Fred, Fleetwood
Galligan M J, A A Parker
Harris Thos-2, Selkirk
Hill F C
Juseth Oleva, Marina
Johnson Fred, J P Donaldson
Jensen P, Harvey H Brown
Knox W S, City of Banbar
Ketchum J B, 2nd.
Lennard Louis
McCarthy Dan
Mooney Jno E, Manchester
Murray Jas H
Marshall Willie, Uganda
Northcott Geo, B Morley
Roswell S H, Amazonas
Smelling Edwin
Schuansfager Fritz
Secord J M, Crescent City
Smith Wallace J, Germania
Slauther Mrs Reuben, care of Sam Dorsen
Stevens Rose L
Thompson Herman, Coralia
Tetro F C, Pontiac
Whitney C, Black Rock
Williams Jno, Merrimac
Yanser Carl, Negaunee
Johnson Erick, Pontiac
Pipher Anna, Box 298

F. B. DICKERSON, P. M.

SHIPMASTERS' BALL AT CLEVELAND.

One of the largest and most pleasant social affairs that have ever been given by the Cleveland Shipmasters' Association was its tenth annual ball Wednesday night at the Chamber of Commerce Auditorium.

About 1,000 guests attended, including many lake captains from out of town. The beautiful auditorium was decorated with palms, and above the stage in blazing electric lights was the inscription, "S. M. A., 1901." The orchestra, stationed behind a bank of palms, played a continuous dance program. Dainty and artistic souvenir programs were presented to each guest.

CHICAGO.

Special Correspondence to The Marine Record.

Work on the new harbor in Indiana, known as Indiana Harbor, is now at a standstill, but ample material is being gathered on the spot for active operations early in the spring. The new Indiana port will not be opened to navigation until the latter end of the season.

The Lumber Carriers' Association will meet in Detroit on Thursday when two or three plans which have been developed for the consolidation of the lumber carriers will be taken up. Of these, the most important is the organization of the Lumber Transit Co., the proposed trust of the lumber carriers.

The following meteorological observations are furnished by the office of the United States Weather Bureau, Chicago, for the week ending January 15, 1901: Prevailing wind directions for the week, northwest; highest velocity, 34 miles from the northwest on the 10th; mean temperature for the week, 29 degrees; highest temperature, 50 degrees on the 9th; lowest, 9 degrees on the 13th.

The steam barge Francis Hinton, owned by Capt. Wm. Evans and A. A. Vanavan, of this city, was sold yesterday to Capt. C. M. Campbell. John Lutz and J. Oliver, of the Indiana Transportation Co., of Michigan City, consideration, $20,000. For the last three seasons the steamer Hinton was under the command of Capt. Evans. The new owners will continue to operate the steamer in the lumber trade from various east shore points.

Capt. Herman Bennett, of the steamer F. W. Fletcher, declines to accept the proposition that lake navigation closes in the winter time. He still has the Fletcher engaged in carrying lumber on Lake Michigan, and is making trips as regularly as in the summer time, bringing cargoes from whatever point he can find them. Capt. Bennett gets $2.50 per 1,000 feet from Ludington, as compared with $1.50 during the summer, and other points are in proportion.

The Pennsylvania Company, operating the Fort Wayne railroad, is having a new slip cut in its yards at One Hundred and Fourteenth street, on the Calumet river. The slip is on the west side of the river, and will be 1,800 feet long and 115 feet wide. This improvement is taken to indicate that the Pennsylvania is going to do a good deal of its lake business on the Calumet instead of the Chicago river. The change marks the steady growth of marine interests at South Chicago at the expense of commerce on the old river.

At the offices of the Northern Grain Co., in this city it was stated that the reports that that company was soon to erect an immense elevator at Manitowoc were rather premature. Plans for an elevator of 2,500,000 capacity, to be absolutely fireproof construction, and built on the most modern plans, were prepared some time ago, but owing to business conditions the time of building has been postponed indefinitely. The company already has three elevators at Manitowoc. The proposed house, when built, will have the largest capacity of any at that port.

C. A. Macdonald, the head of the Shipowners' Drydock Company, at this port, denies the rumor that his company is seriously considering a proposition to erect a shipyard for the construction of steel ships at Manitowoc or Milwaukee. The big new dock of the company in Chicago river will be completed this week and opened for business. This dock will accommodate the largest lake ships and will be equipped for steel repairs and construction. There is not much probability of the company going beyond this in a new yard and dock.

The building of another elevator in Manitowoc during the summer months now seems a certainty. The location of the new structure has practically been determined upon as the south bank of the river taking in the dockage now occupied by the old F. & P. M. warehouse, and extending west to cover the property on which the old Truman & Cooper mill now stands. The capacity of the new elevator will be considerably increased over that of the others owned by the Northern Grain Co. It is advisedly stated that work will commence in the early spring.

The Weaver Coal Co., of Chicago, Detroit and New York, has made an increase of $1,000,000 in its capital stock and bought the Lehigh Valley coal dock at Milwaukee. The dock is said to be the only one the control of which had not been previously secured by one of the three leading coal combinations. Incorporation papers have been filed with the Secretary of State at Madison. The officers are Henry E. Weaver, of Chicago, president; O. A. Sprague, of Milwaukee, vice president and sales agent, and Abe S. Austin also of Milwaukee, secretary and treasurer, and the capitalization is placed at $200,000 with liberty to do business throughout the state of Wisconsin from its mines in West Virginia. It is expected that a quarter of a million tons can be handled by lake and rail during next season.

The liveliest passenger boat war on the lakes for many years is scheduled between Detroit and Cleveland at the opening of navigation next April. It is practically settled that the Barry brothers of this port will put the steamers Empire State and Badger State on that route in opposition with the Detroit & Cleveland Steam Navigation Company. The officials of that company, which has had a monopoly of the Detroit and Cleveland business for a third of a century, have been telling what they would do to an opposition line. Their statements have not scared the Barrys in the slightest. They say that there is a good field for an opposition line, and we are going to enter it. We are not going there to sell out, but to stay. The big Detroit & Cleveland company will find fighting us on the lines. General Manager McMillan outlines a pretty expensive proposition to its stockholders. In any case we can probably carry all of the freight and probably a fair share of the passenger trade as well, or at least enough to keep us going until we put larger and swifter boats on the route.

The plant of the Marine Iron Works, Dominick street, near Southport avenue, which was recently destroyed by fire, is to be rebuilt at once. The buildings will include a two-story machine shop, 40x110 feet; a one and two-story structure, 50x182 feet, for pipe shop and offices, and a two-story boiler-house, 62x64 feet.

The Standard Pneumatic Tool Co. have removed their general offices from Chicago to their new works at Aurora, Ill., where all correspondence should be addressed. They have also greatly increased their facilities for manufacturing, which will enable them to fill orders promptly.

Crane Co., Chicago, distributed to its employes, Dec. 31, 1901, $125,000, with the desire of giving its workers some share, over and above their wages, in the prosperity which it has enjoyed in the year just closed. Every person in the employ of the company, 3,500 men and women in all, received a sum equivalent to 5 per cent. of the money each earned in 1901. No limit was put on length of service; men only a month at work got 5 per cent. of that month's wages.

FLOTSAM, JETSAM AND LAGAN.

The Baltimore Drydock Co. has just contracted to construct two automatic steel coal barges for the Clark Automatic Coal & Weighing Barge Co., of New York. The boats will be 140 feet long, 30 feet beam and 18 feet deep, with a capacity each of 1,000 tons of coal.

Recor, the Marine City shipbuilder, has contracted to build a hull for the engine and boiler of the steamer T. S. Faxton, wnich was destroyed by fire at that place last fall. The dimensions of the craft will be somewhat larger than the Faxton. The cost is put at $25,000.

The Ann Arbor car ferries are still making trips between Frankfort and Menominee via Death's Door. A trip made on Saturday last was rendered very difficult through a movement of the Green Bay ice under pressure of heavy west winds. These winds swept the ice to the vicinity of Death's Door and there piled it up in vast windrows, thus blocking the passage.

At Sault Ste. Marie Mr. Clergue's syndicate has about 4,000 men employed on the various works. Two charcoal and two coke blast furnaces are being erected, the immense steel plant is approaching completion, and the sulphite pulp mill and charcoal works are also in operation, also the ground pulp mill, and the electro-chemical works, producing caustic soda and bleaching powder.

The Marine Engineers' Association, of Toronto, have elected the following officers: Hon. president, O. P. St. John; president, J. A. Findlay; first vice-president, F. Henning; second vice-president, James Currie; representatives on council, Seamy, Flummerfelt, Marriot, W. Noonan, J. T. Noonan; recording secretary, R. Beal; conductor, J. J. Kenny; auditors, William Harwood and Thomas Crossley; financial secretary, James Woodward; treasurer, H. Parker.

A syndicate of capitalists from Saginaw, Mich., is purchasing a fleet of barges to ply between Philadelphia and Port Arthur in the Texas oil carrying trade. The barge Chicago, formerly a New York ferry boat of the same name, has been sold by Peter Hagan, of Philadelphia, to Arthur Hill, of Saginaw, who represents the syndicate, for $10,500. The barges are to be towed up and down the coast by steam vessels. The syndicate contemplates purchasing sufficient vessels to land 1,000,000 gallons of oil at Philadelphia every month.

"Capt. William Griffin, of the steamer Monteagle, wintering at Ogdensburg, received a gold ring as a Christmas present from Capt. Adams, of the British bark Culdoon, now at St. Johns, N. B. Capt. Griffin prizes it highly, as it came from a former shipmate. When Capt. Griffin commanded the Guiding Star Mr. Adams was his second mate. Capt. Griffin intends spending the balance of the winter in the south accompanied by his wife. They intend to visit the Charleston Exposition while in the south."

More than 10,000,000 tons of freight have been handled the past season in the Pittsburg harbor, 6,000,000 tons of it coal. Pittsburg's inland harbor is rated by Uncle Sam as one of the most important in the United States. The harbor as defined by harbor lines, extends from the Davis Island dam in the Ohio river to the site of Allegheny river dam No. 2, and on the Monongahela river to McKeesport, at the mouth of the Youghiogheny river, being an aggregate length of river of 27.5 miles. The general widths in the whole harbor acording to the figures of the Engineer Corps, U. S. A., are, at pool surfaces—on the Ohio about 1,100 feet, on the Allegheny about 930 feet, and at different parts of the Monongahela from about 750 to 950. Scant eight feet is the maximum for the coal boat channel at pool stage. Other parts of the channel are from ten and twelve to sixteen and twenty feet in depth.

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CONSOLIDATION OF BUSINESS ENTERPRISES

A notable address was delivered at the bankers and business men's banquet at Chicago last Saturday, by Chas. M. Schwab, president of the United States Steel Corporation. The theme assigned him was 'The Natural Growth of Business Enterprises and Consolidations Thereof, Their Attitude Generally Toward the Public, Labor and Finance." The toast was notable as coming from the president of the largest iron and steel producing company in the world, for the glimpses of the attitude of that company towards the business world, and for the information it contained relative to the corporation. In part Mr. Schwab said:

"The consolidation, as organized to-day, instead of restricting trade expands trade, by creating new avenues and reducing the price of the commodities which it produces. It is enabled to do this because the chief advantage of consolidation is the reduction in the cost of the articles produced.

This is self-evident and well illustrated by the consolidation and operation of the United States Steel Corporation, which by reason if its magnitude and prominence, may be taken as a repesentative consolidation of business. I choose this field because in doing so I can tread familiar paths, and steel to-day is king in America, and that means in the world. In 1900 the production of steel was greater by $100,000,000 than the production of cotton. This year it will probably be $100,000,000 greater. Therefore it is not improper to let steel represent the general industrial condition under the new system.

The steel industry to date has drawn its ores chiefly from what is known as the Lake Superior district in the Northwest. In fact I believe I may safely say that from 80 to 90 per cent. of all the steel produced in the United States is made from ores in this district. It is the standard ore and one steady source of supply, and, as far as engineers can estimate, there are between 600,000,000 and 700,000,000 tons of ore now known in the lake region. Geologists tell us that the possibility of new discoveries of new ranges is rather remote. The constituent companies of the United States Steel Corporation own, as nearly as we can estimate, from 75 to 80 per cent. of all known Northwestern ores, the value of which is high. If you consider that this ore is to-day being consumed at the rate of 20,000,000, tons a year, with a large increase in consumption each year, which I believe will grow greater day by day, I think you will commence to appreciate the value of this ore in years to come.

These great steel companies were not put together with the view of avoiding competition, because, in very rare instances, they were engaged in different lines of business. But they were put together for the purpose of strengthening the steel products and developing the interests in this country. In the great Northwest, where we have all those ore mines, each individual company could not own the particular mine that would enable them to make the best mixture for the respective qualities of iron and steel, but by consolidation of all these interests it was possible to group the mines as one, to take the ores from the different mines to the works best suited to make the ideal mixture, to do it at the least cost, and to produce the best article. So in transportation. Instead of a small fleet, whose steamers would have to wait at the docks for loading and unloading, as suited their respective owners' works, they now come down in rotation. They are loaded, and their cargoes are not assigned to their respective works until after they are well down on the lakes. Now, any one familiar with the shipping industry will appreciate at once the great saving in economy in such a method of operation. So now the mills that formerly made a dozen products run continuously on one. The result of that is cheapening the product in every line, of making the steel available for many purposes for which it is not available at present, and the idea of business consolidation has been reached.

Now, to come to the second part of my remarks. The two things about the United States Steel Corporation that seemed to be best known and most generally discussed were, first, its capitalization, and, second, the salary of its president. Of the first of these I am not afraid to speak. Of the second, I am a little like our Hebrew friend in New York, who, when asked what he would do for $10,000 said he was ashamed to tell. These great consolidations owe a duty to the public. I am in hearty sympathy with President Roosevelt when he says that publicity is the thing we require in all things pertaining to great industries. I second that proposition most heartily. The great combines of capital that are not formed on a basis that will permit of a publication of their affairs are founded on an erroneous assumption, and I am not with them.

I first became identified with the steel industry in the year 1879, and I remember very well that we prided ourselves—the whole United States—upon having produced about 600,000 tons of steel. In the year 1895 there was produced about 6,000,000 tons of steel, and in this year just ending, as nearly as we can estimate, there will be produced about 15,000,000 tons of steel in the United States. Five years ago there was scarcely a ton of steel used in the manufacture of cars for anything else than wheels and axles. To-day the car industry alone is consuming more than 300,000 tons of finished steel, and I believe it is only on the threshold. So in shipbuilding. The shipbuilding industry has not been extensive in this country. It will not get its growth until we get the start we ought to have by reason of the ship subsidy bill; but when it does, you may look for a tremendous increase in that direction. And notwithstanding the dormant state of this industry within the last four years, the tonnage of ships built from steel has increased 400 per cent. and this includes none of the battle ships or ships for any other than commercial purposes.

STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade, January 11:

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels
Buffalo	6,066,000	648,000	720,000	83,000	1,104,000
" afloat	598,000	84,000	.....	.....	.....
Chicago	6,745,000	4,764,000	796,000	972,000	148,000
" afloat	417,000	.....	.....	77,000	.....
Detroit	635,000	204,000	8,000	144,000	26,000
Duluth	9,497,000	335,000	154,000	448,000	255,000
" afloat	511,000	.....	.....	.....	.....
Fort William, Ont.	3,103,000	.....	.....	.....	.....
Milwaukee	416,000	74,000	203,000	35,000	156,000
Port Arthur, Ont.	75,000	.....	.....	.....	.....
Toledo	232,000	863,000	611,000	246,000	6,000
Toronto	42,000	.....	6,000	.....	44,000
On Canals	46,000	3,000	112,000	37,000	50,000
Grand Total	58,077,000	11,643,000	4,544,000	2,409,000	2,149,000
Corresponding Date, 1900	61,845,000	10,632,000	9,212,000	1,242,000	2,230,000
Increase for week	.....	.....	.....	48,000	.....
Decrease " "	852,000	59,000	458,000	.....	175,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

MARINE PATENTS.

690,402.—Cradle for Marine Railways, J. L. Crandall, assignor to H. I. Crandall & Son Co., Boston, Mass., a corporation of Maine.

690,685.—Life Boat, A. Anrep, Moscow, Russia.

690,821.—Marine Propulsion, J. J. Astor, New York, N. Y.

690,909.—Life Boat, R. D. Mayo, Frankfort, Mich.

Business at Dunford & Son's drydock is booming. The Leland is now being overhauled and as soon as possible the Racine, Argonaut, Havana and Hanaford will be repaired.

NOVEMBER FREIGHT RATES.

According to the summary of commerce and finance for November, issued by the Treasury Department, Bureau of Statistics:

The freight rates prevailing during the month on the four leading commodities—grain, coal, lumber, and ore—were as follows: On grain, wheat, Chicago to Buffalo, 1½ to 2⅛ cents per bushel; to Lake Erie ports, 2, 2⅜, and 2½ cents per bushel; Duluth to Buffalo, 3¼ cents per bushel; to Lake Erie ports, 3¾ cents per bushel; to Ogdensburg, 6 cents per bushel; Green Bay to Buffalo, 2½ cents per bushel. On corn, Chicago to Lake Erie ports, 1¾. 1⅞, 2, and 2¼cents per bushel.

The following rates also prevailed during November: On oats, Chicago to Lake Erie ports, 1½ to 1¾ cents per bushel; to Ogdensburg, 5 cents per bushel; Milwaukee to Buffalo, 1½ cents per bushel. On barley, Milwaukee to Buffalo, 3 to 2¼ cents per bushel. On flaxseed, Duluth to Buffalo, 3¼ cents per bushel. On coal, Buffalo to Sault Ste. Marie and Marquette, 50 cents per ton; to Gladstone, 60 cents per ton; to Milwaukee and Chicago, 70 to 80 cents per ton; to Chicago (South Branch), 70 and 90 cents per ton; to Racine, 80 cents per ton; Lorain to Milwaukee, 60 cents per ton; Cleveland to head of Lakes, 50, 60, and 75 cents per ton.

On lumber, Duluth to Ohio ports, $3 per thousand feet; to Cleveland, $3.25 per thousand feet.

On ore, Escanaba to Buffalo, 80 cents per ton; to Ohio ports 75, 85, and 90 cents per ton; Marquette to Cleveland, $1 per ton; Buffalo, $1.20 per ton; to Lake Erie ports, $1.15 per ton; head of lakes to Lake Erie ports, $1.15 to $1.25 per ton.

Lake commerce through Sault Ste. Marie canals for the eight months ending November 30 amounted to 27,817,811 tons of freight, 22,619, 900 tons of which were east bound from Lake Superior and 5,197,802 tons were west bound. These totals include the traffic by way of both the United States and the Canadian canals. The tonnage of freight passing through the American canal was 25,026,522 tons, and through the Canadian canal 2,791,289 tons. Approximately four times as many vessels passed through the American as the Canadian canal and nearly nine times as large a tonnage.

Compared with last year's operations, the number of vessels, as well as the freight tonnage, have increased more rapidly by the Canadian than by the United States canal. The total tonnage by both channels to the end of November, 1900, was 25,270,538 tons, of which 23,251,539 tons proceeded by way of the American canal and 2,108,999 tons through the Canadian canal, borne by 16,144 vessels and 3,003 vessels, respectively. The net registered tonnage to November 30, for this season, was 24,234,295 tons, 21,865,144 tons of which passed through the American canal and 2,375,151 tons through the Canadian canal.

STEAMSHIP DRIVEN BY LIQUID FUEL.

The Shell Transport and Trading Co., of London, has one of its steamships plying between England and Borneo driven entirely by means of liquid fuel, says Scientific American. This company has established a chain of stations between London, China, and Japan, via Marseilles, where their steamers can replenish their supply of liquid petroleum. The first station for this purpose in the English Channel has been recently opened at Dover, while the company contemplates founding similar stations at Havre and Liverpool. The company states, as the result of its experiments, that a vessel of 3,500 tons driven by liquid fuel requires only three firemen, whereas a crew of 18 or 20 firemen is necessary if coal is utilized. The whole of the furnaces throughtout a watch are attended by one man, the feeding being automatic. The calorific power of the fuel is said to be from 60 to 100 per cent. higher than ordinary coal, while the space required for storage is about one-half. The fuel is residual from crude petroleum, is non-explosive, and is of the consistency of thin treacle. Another salient characteristic of liquid fuel is the cleanliness of the ship, since there is practically no smoke, and absolutely no grit or dust.

A PAST INDUSTRY.

(Chicago Correspondent Southern Lumberman.)

The permanent closing of the great mills of the Menominee River Lumber Co., at Marinette, Wis., last month, after half a century of constant service, was an interesting and significant event in one of the chief industries of the country. In a word, it was an epoch-making step in the moving of the center of the lumber industry from Northern Michigan and Wisconsin to the great hardwood forests of the Mississippi Valley.

The Marinette mills were largely the property of Jesse Spalding, of Chicago, and represented the foundation of his present large fortune. Their closing indicates the exhaustion of a tract of 150,000 acres of timber land in Northern Michigan.

When Mr. Spalding and others first began cutting on the Menominee river, the pine forests of Wisconsin and Michigan were practically virgin, and they had merely to pick and choose from the finest pine woods on the continent. Mill after mill started up on the river and at Sturgeon Bay, at Cedar river, Ford river and scores of other points.

Millions of logs were sent down stream every year, and mile after mile of timber was exhausted. Fire was responsible for much havoc and now the great tract which Mr. Spalding controlled is barren of pine.

A tract of 140,000 acres of hardwood remains, but this will be sold standing.

Since the Spalding Co. was formed fifty years ago, it has cut more than a billion feet of pine and had but one strike. Among its employees who were thrown out of work last week were some who had been with the company more than forty years.

It is proposed to use the site of the mill, if possible, for a manufacturing plant of some kind, in the hope that Marinette may survive the loss of her lumber trade, but it is doubted if much will come of the plan.

The story of the Spalding mills is that of countless similar enterprise throughout the lumber country of Michigan and Wisconsin. And the lumber mills in the hardwood forests of the Mississippi have increased faster than the mills of northern Michigan and Wisconsin have died out.

The passing southward of the lumber producing center gives rise to some interesting speculations. The great lumber areas of northern Michigan and Wisconsin made Illinois, Michigan and Wisconsin the great furniture manufacturing field of the Western hemisphere.

With the exhaustion of these Northern lumber areas and the opening up of the splendid resources of the Mississippi forest, what is to prevent the great furniture manufacturing industry from moving southward in its turn? That it must move, and that the movement will begin soon, seems inevitable. The day will be a bad one for Chicago and Milwaukee.

It does not require great powers of imagination to look still further into the future. Our magnificent northern forests lasted almost exactly half a century from the time the echo of the first steam saw rang through them.

The Mississippi forests are vaster, but the demands for lumber are advancing with giant leaps and bounds before which a few thousand square miles of forest area are a little thing. Give the Mississippi lumber areas the productive life of the Wisconsin and Michigan forests. Where is the country's lumber of the twenty-first century to come from?

The forests of the Southeastern states—Georgia, the Carolinas—may be disregarded, likewise those of the far Northwest. There remains the Dominoin of Canada, with great lumber resources, but, unfortunately, Canada will probably have her own ideas about exploiting these resources.

The point is that the forests of Wisconsin and Michigan might still be flourishing if the science of forestry had existed fifty years ago in the state of development which it has reached to-day, and if its utilty had been as well understood. It promises to be better understood within the next quarter century and far more greatly developed.

In its practical and early application to production of lumber would seem to lie the only possibility of permanence for that great industry.

LIQUID FUEL FOR STEAMERS.

A large party of gentlemen interested in steamshipping and engineering accepted the invitation of Sir Marcus Samuel, head of the Shell Transport and Trading Company, to witness on board the S. S. Clam, in the run from Gravesend to Port Victoria, a demonstration of the efficiency of liquid fuel. The Clam has been for over two years burning oil as fuel, and "has performed the longest known mileage on that system." Rock-oil, so used, is not an innovation, but until recently it was an axiom that it did not pay west of Suez. But the owners of the Clam, who hold the concession of the oil lands in Borneo, believe that the rich finds of oil in Texas, in which also they are largely interested, render liquid fuel practicable for steamers in western seas. Its recommendations are efficiency, two tons of oil being equal, it is asserted, to three tons of coal; economy of space, the oil being carried in tanks, which may take the place of water ballast, and in any form occupy less room than coal bunkers; and saving of labor, three stokers taking the place of fifteen hands on board the Clam. Practically there is no stoking; the oil flows by gravity directly into the furnace.

In the combustion of oil the first essential is to throw the liquid into a fine spray, so that every minute drop of oil vapor is ignited. This is effected by a small jet of steam, the steam acting with the oil as a Bunson burner does with gas. The steam and oil mingle at the nozzle of the delivery-pipe at the mouth of the furnace, and a large, intensely hot white flame is produced, a "baffler" of fire brick directing it on the boiler. Rock-oil yields four substances—benzine, petroleum, solar oil and a fluid residuum—the latter is the material used for liquid fuel. It has the advantage of being neither volatile, like benzine, nor having an easily inflammable vapor like petroleum or solar oil. Its flash-point is over 200, and this obviates the risk of explosion.

Sir Marcus Samuel observed that the introduction of liquid fuel had been prevented by questions of continuity and regularity of supply, and the price compared with coal. These points were now settled. Oil fuel was largely used in the east, where their company had forty-one ocean supply installations and 350 up-country stations. The North German Lloyd, the East Asiatic Co., of Copenhagen, and the Hamburg and American Line had adopted it. They were now able to guarantee supply with perfect confidence. Capt. McKirdy, of the White Star Line, believed there was a great future for liquid fuel. Sir J. Fortescue-Flannery, speaking as an engineer, expressed full confidence in the new system, as did Capt. Coudon, the company's marine superintendent, speaking from his experience on board the Clam and the Murex.—Steamship, London.

ENGINEERS' SHIPPING INTERESTS.

Mr. Gerald Balfour, president of the British Board of Trade, in a recent address in Liverpool said that the growth of the British shipping industry since the accession of Queen Victoria had been marvelous, even in an age of progress. The number of vessels on the register of the empire had increased from 26,000 in 1836 to 35,000 in 1900, and in steamships from one in forty to one in three. There had also been an enormous increase in the tonnage of steamships. With all this enormous advance there had been, with the substitution of steam for sailing ships, a very great diminution in the loss of life at sea. Dealing with the question of foreign competition, he said that while the transference of British vessels to foreign flags had naturally occasioned a great deal of comment within the last few years, yet come to analyze it, it was not such a serious matter. For example: During the past year there had been so transferred vessels of the gross tonnage of not less than 600,000, but it was to be remembered that during the same year there had been added to the British register 1,200,000 tons gross, the significant fact being that 93 per cent. of the latter was new tonnage, almost entirely constructed in the United Kingdom. Of the vessels transferred 33 per cent. were constructed before 1885, and no less than 55 per cent. were constructed before 1890. That was a very material fact, he said, in the true significance of this transference of ships to foreign flags. He admitted that they could not regard with anything like indifference efforts made by foreign governments to secure a larger share of the carrying trade of the world. The British shipping trade occupied a unique position among the industries of the country. More than any other, it was essential to, and intimately connected with, the life of the Nation. If the British lost their mercantile marine it would mean nothing less than the destruction of the British Empire. The empire was esentially an empire of the sea; it rested upon two great supports, the navy in the first instance, and the mercantile marine in the second. Heavy would be the responsibility of any government which by fault of omission or commission placed in jeopardy the mercantile marine.

Shipping.—Loss of Cargo.—Unseaworthiness of Barge.—A vessel some fifty years old, which had been used as a steam propeller until she had become unfit for such service, and afterwards converted into a freight barge, sank at a dock with her cargo during the night, after she had been loaded. The evidence showed that the immediate cause of her sinking was a leak due to the springing of a plank in her hull, the spikes which held it having been loosened. The only peril to which she was subjected was that from the swells caused from passing vessels, and that was one which was usual and ordinary, and was withstood by other vessels at the dock without injury. Held, That the presumption arising from such facts was that the barge was unseaworthy, and that her sinking was due to that cause, in the absence of evidence establishing some other adequate cause. Forbes et al. vs. Merchants' Exp. & Transp. Co., 111 Fed. Rep. (U. S.) 796.

A meeting of the incorporators of the Great Lakes & St. Lawrence Transportation Co., the new corporation to build up the commerce of the port of Quebec, was held in New York last Friday, and arrangements were made to announce the permanent organization of the company, including its officers, this week. A number of vessels on the Great Lakes adapted to navigation through Canada's waterway have been optioned by the company for the coming season, to be ready for use promptly at the opening of navigation. European trade, that formerly went in part by Buffalo and New York, will be part of the business of the new company. Its members from the Great Lakes are men with connections controlling considerable commerce.

Capt. Sam Neff, of Milwaukee, has let a contract to Johnson Bros., of Ferrysburg, Mich., for a Scotch type boiler to be placed in the steamer W. P. Ketcham. The boiler will be a duplicate of the one in the steamer Pentland, about thirteen feet in length and diameter.

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will mail its 1902 Calendar to any one making application to the General Passenger Agent, Cleveland, Ohio. 2-2

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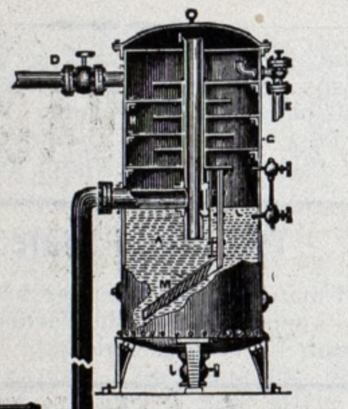

NAMES OF STEAMERS ON THE LAKES USING THE BUFFALO FEED WATER HEATER AND PURIFIER:

Zenith Transit Co.'s steamers Empire City, Crescent City, Zenith City, Superior City, Queen City, Pennsylvania and John W. Gates.

The Republic Iron Co.'s steamers America, Brazil, Thomas Maytham and Chili.

Mitchell Transportation Co.'s steamer Hendrick S. Holden.

Minnesota Iron Co.'s steamer Presque Isle.

American Steel Barge Co.'s steamer Alex. McDougall.

Lake Michigan & Lake Superior Transportation Co.'s steamer Manitou.

Bessemer Steamship Co.'s steamers S. F. B. Morse and Douglas Houghton.

American Transportation Co.'s steamers John Harper and Alex. Nimick.

Red Star Line's steamers Robert Mills and Wyoming.

Wilson Transit Line's steamers W. D. Rees and Andrew Carnegie.

And the steamer William R. Linn.

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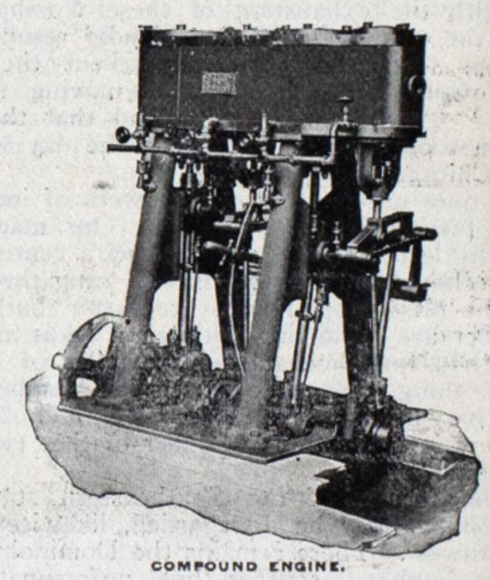

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DORR SYSTEM OF SAFETY DOORS IN THE BULKHEADS OF VESSELS.

At the invitation of Mr. Gustav H. Schwab a number of prominent nautical, naval and newspaper men met at lunch last Friday, on the North German Lloyd steamer Kronprinz Wilhelm, in order to witness the working of the closing and opening of the Dorr Safety Doors. constructed in the bulkheads of the vessel. Every expert present voted the system a perfect success, far superior to any other device in existence. For a number of years the North German Lloyd had made experiments with the construction and arrangements and plans to prevent the sinking of vessels in collision.

After having, thorough a number of these experiments introduced with great cost, perfected the present system, the North German Lloyd have decided to equip their entire fleet of vessels with this safety arrangement, by which the doors can either be closed or opened from the bridge, or from some other central part of the vessel, from the engine room or at the door itself. The safety of vessels depend to a very large extent on an absolutely reliable system of bulkhead doors, as it is impossible to construct a steamer without providing for connecting doors through bulkheads in a number of compartments. The watch officer on the bridge under the Dorr system is at any time able to close all open compartment doors in case of an approaching collision, and can re-open these compartment doors as easily. In order to close the compartment doors under this system it is necessary to move a lever, in doing which electric bells are sounded at every door, ringing for about 20 seconds. Thereupon the doors close slowly, this method having been devised to avoid accidents. The closing and opening of the doors is effected by hydraulic pressure. thus avoiding the possibility of injury through the breaking of steam pipes or through the interruption of any electricity.—New York Maritime Register.

AN article on wireless telegraphy printed in Casssier's Magazine for January, with an illustration of an ancient Gaul shouting a message from a hilltop to a brother-in-arms some distance away, who, similarly, transmitted the message to yet another farther removed station, and so on and on, across a wide stretch of country in a short space of time, recalls the fact that this form of communication—a species of wireless telegraphy we may be pleased to term it—is in use to-day by the peasantry in one of the southern mountain sections of the United States to warn the proprietors of illicit stills when the revenue officers are on the war path. When they come in sight of a cabin, the tenant emerges with a tin horn and sounds a blast which is taken up at the next cabin, and so on along the trail to the heart of the mountains. There is nothing to seize when the raiders arrive at the suspected place, and when they retire business is resumed.

AN INTERESTING SIGHT.

A United States transport steamer manned mostly by a crew of native Filipinos could hardly fail to excite a lively general interest at the present moment in any American port. That sight is now to be seen at the Arlington dock, in Seattle, where the transport steamer Dix is lying at the end of her voyage from Manila. Her crew is interesting in the first place as affording the vast majority of our citizens their first opportunity to see specimens of the people that have occupied such a prominent place in the world's discussions during the past three years, and whose well being and fate is now in the keeping of the United States.

It is interesting in a deeper and more far-reaching way as an eloquent, impressive object lesson in the manner our country proposes to educate, develop and upbuild this interesting branch of the human family and fit them for ultimate local self-government, enjoying the fullest independence and freedom under the protection of the Stars and Stripes as their general sponsor and protector.

It is interesting also as an ocular demonstration of the rapidly increasing intimacy and business relations between the Orient and these United States, and superlative importance of Seattle in the development of the new channels and highways of the world's most important commerce. It is significant and prophetic that the first Filipino crew to serve a steamship in crossing the Pacific makes Seattle as the end of the first American port and the end of the voyage.—Railway News, Seattle.

MARINE PATENTS ISSUED.

690,402. Cradle for marine railways. James L. Crandall, Boston, Mass., assignor to H. I. Crandall & Son Co., Boston, Mass., corporation of Maine.

690,685. Life-boat. Aleph Anrep. Moscow, Russia.

690,821. Marine Propulsion. John J. Astor, New York, N. Y.

690,909. Life-boat. Robert D. Mayo, Frankfort, Mich.

Design 35,559. Life-preserver body. Machig A. Ayvad, Hoboken, N. J. Term of patent 14 years.

691,080. New Facing Oar. Orlando B. Shedd, St. Johnsville, N. Y.

691,123. Pumping and Dredging Apparatus. Geo. A. Farwell, Manchester, N. H.

691,153. Life-saving Apparatus. Icilius W. Maccolini, Inwood, N. Y.

691,160. Torpedo Boat. Thomas J. Moriarty, Newport, R. I., assignor of one-half to John T. Reagan, same place.

691,258. Screw Propelled Boat. Herman T. Gay, Baltimore, Md.

691,300. Reversing Apparatus for Propeller Shafts. John Titus, Townsend W. Hurt and Daniel D. Smith, Oyster Bay, N. Y., assignors to the Oyster Bay Engine Co.

691,314. Propulsion of Ships. Frederick C. Homer, Stoke-upon-Trent, England.

691,341. Life-preserver. Charles Gore, San Francisco, Cal.

Design 35,590. Vessel's Hull. Carl J. H. Flindt, Brooklyn, N. Y., assignor of two-thirds to James B. Farrell, Jr., and Edmund McMurray, Brooklyn, N. Y. Term of patent 14 years.

Towage.—Negligence.—A steam tug is bound to bring to the performance of the duty it assumes responsible skill and care in everything relating to the work. The want of such skill and care is negligence, and the owner of the tug is liable for the full measure of the consequences. Butler-Ryan Co. vs. Williams et al., 88 N. W. Rep. (Minn.) 3.

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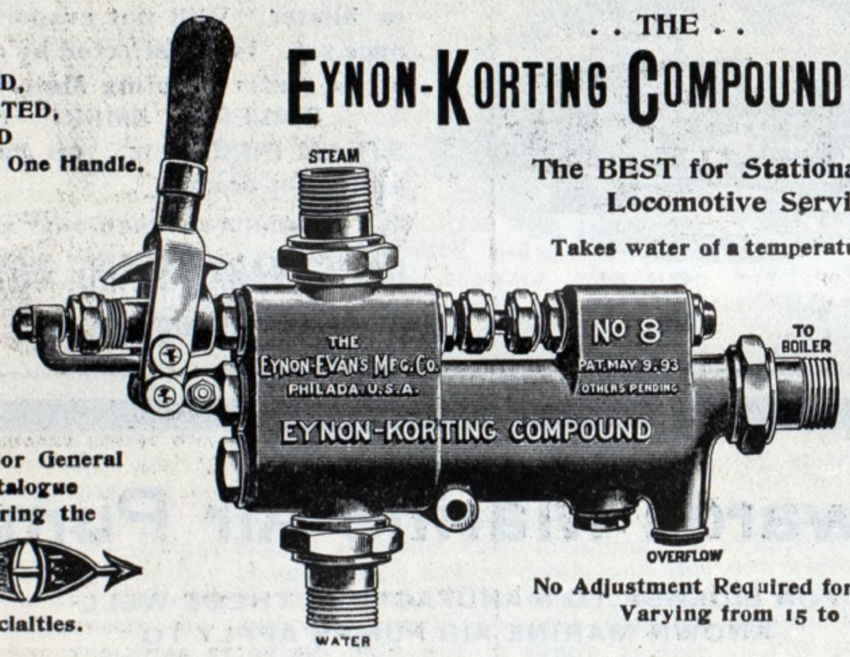

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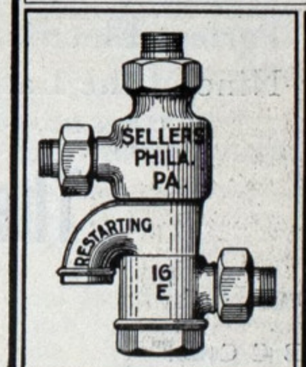

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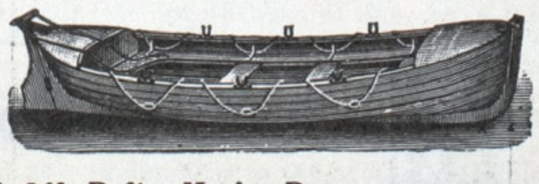
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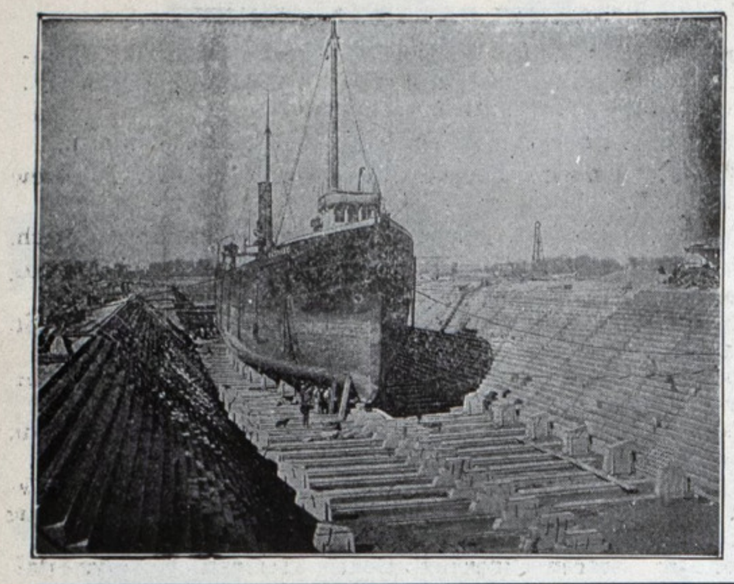

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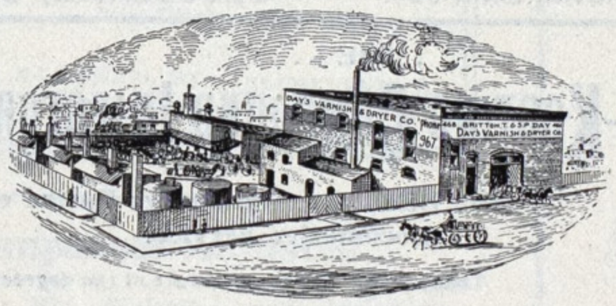

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